DENR USE ONLY: ☐ Paper Report ☐ Electronic Data - Email CD (data loaded: Yes / No) Doc/Event #:

NC DENR
Division of Waste Management - Solid Waste

Environmental Monitoring Reporting Form

Notice: This form and any information attached to it are "Public Records" as defined in NC General Statute 132-1. As such, these documents are available for inspection and examination by any person upon request (NC General Statute 132-6).

Instructions:

- **Prepare one form for each individually monitored unit.**
- **Please type or print legibly.**
- Attach a notification table with values that attain or exceed NC 2L groundwater standards or NC 2B surface water standards. The notification must include a preliminary analysis of the cause and significance of each value. (e.g. naturally occurring, off-site source, pre-existing condition, etc.).
- Attach a notification table of any groundwater or surface water values that equal or exceed the reporting limits.
- Attach a notification table of any methane gas values that attain or exceed explosive gas levels. This includes any structures on or nearby the facility (NCAC 13B .1629 (4)(a)(i).
- In accordance with NC General Statutes Chapter 89C and 89E and NC Solid Waste Management Rules 15A NCAC 13B, be sure to affix a seal to the bottom of this page, when applicable.
- Send the original signed and sealed form, any tables, and Electronic Data Deliverable to: Compliance Unit, NCDENR-DWM, Solid Waste Section, 1646 Mail Service Center, Raleigh, NC 27699-1646.

Solid Waste Monitoring Data Submittal Information

Name of entity submitting data (laboratory, consultant, facility owner):

Contact for questions about data formatting. Include data preparer's name, telephone number and E-mail address:

Name: Trevor J. Benton, P.G. Phone: 864-288-1265

E-mail: trevor@blecorp.com

Facility name:	Facility Address:	Facility Permit #	NC Landfill Rule: (.0500 or .1600)	Actual sampling dates (e.g., October 20-24, 2006)
White Oak Landfill	278 Recycle Road Clyde, North Carolina	44-07	.1600	October 26-27, 2010

Environmental Status: (Check all that apply)

☐ Initial/Background Monitoring ☒ Detection Monitoring ☐ Assessment Monitoring ☐ Corrective Action

Type of data submitted: (Check all that apply)

☒ Groundwater monitoring data from monitoring wells
☒ Groundwater monitoring data from private water supply wells
☒ Leachate monitoring data
☒ Surface water monitoring data
☐ Methane gas monitoring data
☐ Corrective action data (specify) _____
☐ Other(specify) _____

Notification attached?

☐ No. No groundwater or surface water standards were exceeded.
☒ Yes, a notification of values exceeding a groundwater or surface water standard is attached. It includes a list of groundwater and surface water monitoring points, dates, analytical values, NC 2L groundwater standard, NC 2B surface water standard or NC Solid Waste GWPS and preliminary analysis of the cause and significance of any concentration.
☐ Yes, a notification of values exceeding an explosive methane gas limit is attached. It includes the methane monitoring points, dates, sample values and explosive methane gas limits.

Certification

To the best of my knowledge, the information reported and statements made on this data submittal and attachments are true and correct. Furthermore, I have attached complete notification of any sampling values meeting or exceeding groundwater standards or explosive gas levels, and a preliminary analysis of the cause and significance of concentrations exceeding groundwater standards. I am aware that there are significant penalties for making any false statement, representation, or certification including the possibility of a fine and imprisonment.

Trevor J. Benton, P.G. — Facility Representative Name (Print)

Hydrogeologist — Title

864-288-1265 — (Area Code) Telephone Number

Signature

2/15/2011 — Date

Affix NC Licensed/ Professional Geologist/Engineer Seal here:

Revised 01/2007

BUNNELL-LAMMONS ENGINEERING, INC.

GEOTECHNICAL, ENVIRONMENTAL AND CONSTRUCTION MATERIALS CONSULTANTS

REPORT OF GROUNDWATER QUALITY RESULTS & STATISTICAL ANALYSIS

SECOND SEMI-ANNUAL SAMPLING EVENT OF 2010

WHITE OAK LANDFILL
PERMIT NUMBER: 44-07
HAYWOOD COUNTY, NORTH CAROLINA

Prepared for:

HAYWOOD COUNTY SOLID WASTE MANAGEMENT
278 Recycle Road
Clyde, North Carolina 28721

Prepared By:

BUNNELL-LAMMONS ENGINEERING, INC.
6004 Ponders Court
Greenville, South Carolina 29615

February 11, 2011

BLE Project Number J10-1957-20

BUNNELL-LAMMONS ENGINEERING, INC.
GEOTECHNICAL, ENVIRONMENTAL AND CONSTRUCTION MATERIALS CONSULTANTS

February 11, 2011

Haywood County Solid Waste Management
278 Recycle Road
Clyde, North Carolina 28721

Attention: Mr. Stephen King
Solid Waste Director

Subject: **Report of Groundwater Quality Results & Statistical Analysis**
Second Semi-Annual Sampling Event of 2010
White Oak Landfill
Permit Number: 44-07
Haywood County, North Carolina
BLE Project Number J10-1957-20

Dear Mr. King:

As authorized, Bunnell-Lammons Engineering, Inc. (BLE) has performed the statistical analysis of groundwater quality data obtained during the second semi-annual sampling event of 2010 for the White Oak Municipal Solid Waste (MSW) and Construction and Demolition (C&D) Landfills. The enclosed report describes the work performed and presents the results obtained with our conclusions. The purpose of this work was to statistically compare the laboratory analytical results of groundwater samples from the background monitoring wells to the downgradient monitoring wells at the subject landfill in accordance with Title 15A NCAC 13B .1632 (g), (h), and (i). This report of the sampling and statistical analysis has been prepared for submittal to the North Carolina Division of Waste Management (NCDWM) in accordance with Rule 15A NCAC 13B .1632 (j).

We appreciate the opportunity to serve as your geological consultant on this project and look forward to working with you on future projects. If you have any questions, please contact us at (864) 288-1265.

Sincerely,
BUNNELL-LAMMONS ENGINEERING, INC.

Trevor J. Benton, L.G.
Project Geologist
Licensed, North Carolina No. 2025

Mark S. Preddy, L.G.
Senior Geologist
Licensed, North Carolina No. 1043

cc: Mr. Ervin Lane – NC DENR Solid Waste Section, 401 Oberlin Road, Suite 150, Raleigh, NC 27605

6004 PONDERS COURT
GREENVILLE, SOUTH CAROLINA 29615
PHONE (864) 288-1265
FAX (864) 288-4430

PROJECT INFORMATION

The subject landfill site is located in Haywood County, North Carolina, approximately twelve miles north of the city of Waynesville on White Oak Road at exit 15 of Interstate 40 (Figure 1). The Subtitle D lined MSW landfill has eleven groundwater monitoring wells consisting of two upgradient (MW-11S and MW-11D) and nine downgradient wells (MW-1A, MW-2, MW-2D, MW-3r, MW-3Dr, MW-4A, MW-8, MW-16, and MW-17). Monitoring wells MW-5A, MW-5D, MW-12, MW-13S, and MW-13D were abandoned during June and July 2009 as related to the construction of Phase No. 3 at the facility. Additionally, there are four surface water sampling points (SW-1, SW-2, SW-3, and SW-5), a leachate lagoon sampling point (LSP), and a settling pond sampling point (SPP). The C&D landfill, which is located on the same property, is monitored by one upgradient (MW-14), one downgradient well (MW-15), and two locations for surface water monitoring (SW-6 and SW-7).

BLE was retained by Haywood County to prepare the semi-annual sampling reports for 2010. Historical data from multiple sources and in multiple formats had to be gathered from multiple sources and formats, and synthesized into this report. Water quality data available to BLE extends back to April 1993, however, many of the currently existing wells were not present during the earlier sampling events. As a result, the statistical database in this report uses data from sampling events ranging from April 2000 to the current sampling event (October 2010).

This report presents data from the second semi-annual sampling event in 2010 for the site. The water samples were collected and analyzed as required in North Carolina's regulations for operation of MSW and C&D landfills.

FIELD ACTIVITIES, SAMPLING, AND ANALYSIS

Groundwater and surface water samples were collected for the second semi-annual sampling event of 2010 by personnel from Pace Analytical Services, Inc. (Pace) of Asheville, North Carolina on October 26 through 27, 2010. Sampling was performed in general accordance with the *Operations Plan* for the White Oak Landfill. Summary tables of historic and current analytical results are attached in Appendix A (groundwater) and Appendix B (surface water).

Water samples were collected from the monitoring wells, surface water points, and the LSP. During the previous sampling event, monitoring wells MW-3, MW-3D, and MW-9 were covered with fill soil and could not be accessed for sampling, since then MW-3 and MW-3D have been replaced with MW-3r and MW-3Dr. Additionally, two new wells MW-16 and MW-17 have been installed in association with intercepting flow form the phase 3 and future phase 4 areas. The collected samples were analyzed in the laboratory for North Carolina's *Appendix I* list of constituents that include total metals and volatile organic compounds (VOCs) and in the field for pH, specific conductance, and temperature. A copy of the Pace laboratory and field data is included in Appendix C.

The water level data collected during the groundwater sampling is presented in Table 1. A water table surface elevation contour map is presented as Figure 2 along with generalized groundwater flow directions. Flow velocity calculations are provided on Table 2. Please note, hydraulic

conductivity and effective porosity values for the existing wells were obtained from prior reports prepared by other consultants.

SUMMARY OF LABORATORY RESULTS

Groundwater

Concentrations of total arsenic (two wells), total barium (thirteen wells), total chromium (six wells), total cobalt (four wells), total copper (three wells), total lead (one well), total nickel (six wells), total vanadium (five wells well), and total zinc (six wells) were detected in the groundwater monitoring wells during the current sampling event. Of the detected concentrations only one (total lead) was above the North Carolina maximum contaminant level[1] (MCL) in well MW-15. No VOC's were detected. A summary of the detected concentrations is included in Appendix A.

Surface Water

Total metals were detected in each of the six surface water samples, and the LSP samples during the current sampling event. The detections included total antimony (LSP), total arsenic (LSP), total barium (six surface waters, and the LSP), total beryllium (LSP), total chromium (one surface water and LSP), total cobalt (two surface waters), total copper (one surface water), total nickel (two surface waters and LSP), total selenium (LSP), total vanadium (one surface water and LSP), and total zinc (two surface waters). No VOCs were detected in the samples from the surface water. However, nine VOCs (benzene, 1,4-dichlorobenzene, cis-1,2-dichloroethene, ethylbenzene, toluene, methyl-tert-butyl-ether, naphthalene, p-isopropyltoluene, and xylenes) and phosphorus were detected in the LSP sample. Only the concentrations copper and zinc in SW-3, and arsenic, selenium, and toluene in the TSP sample were detected above North Carolina's established surface water MCLs[2]; the other detections were either below the MCL or a MCL has not been established for the detected constituents. Additionally, one field parameter (pH) in SW-6 was measured below the established North Carolina minimum surface water MCL. Summary of the detected surface water concentrations is included in Appendix B.

STATISTICAL METHODS PERFORMED

The purpose of performing statistical analysis of groundwater quality data is to determine if a release of leachate has occurred from the landfill cells to the groundwater at the site. The US EPA has prepared a guidance document for evaluating groundwater quality data titled *Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities – Unified Guidance* (March 2009). The procedures and methodology used for data analysis of this project are consistent with this US EPA guidance document, and meet or exceed the performance criteria specified in the North Carolina solid waste management rules Title 15A NCAC 13B .1632(g-i). Four methods of statistical analysis

[1] North Carolina Department of Environment and Natural Resources, Classifications of Water Quality Standards, Section 15A NCAC 2L.202, December 1, 2005.

[2] North Carolina Department of Environment and Natural Resources, "Redbook", Surface Waters and Wetlands Standards, Section 15A NCAC 02B.0100, .0200, and .0300, May 1, 2007.

were performed depending on the number of detected concentrations and the distribution of the data for a specific compound, as follows:

1. If 15% to 90% of the data were not detected, the one-way non-parametric analysis of variance (ANOVA) Kruskal-Wallis rank-sum test was performed;

2. If less than 15% of the data were not detected, and if the data was normally distributed and homogeneous, then one-way parametric ANOVA was performed. If the data were not normally distributed and homogeneous, then a non-parametric type test was used (Kruskal-Wallis);

3. Alternatively, if greater than 50% of the data were not detected, Poisson Prediction Limits may be performed, or if less than 50% of the data were not detected, Normal Prediction Limits may be performed. Wilcoxon rank-sum tests were performed for those compounds that failed the initial Poisson Prediction Limits test; and

4. Intrawell comparisons were performed, if necessary, using Shewhart-CUSUM control charts or the Kendall-Mann Non-Parametric Trend Test.

It is important to note that the nature of the statistical procedures applied to the data frequently leads to false positives, which result in statistically significant increases (SSI). These false positives are inherent to the statistical procedures themselves and are a result of the insufficiency of the mathematical equations to represent the multiple factors affecting the groundwater quality variability at a given site. Furthermore, a clear distinction should be made between the terms "calculated SSI" and "validated SSI." A calculated SSI is the result of the application of mathematical equations to evaluate variability of water quality data over time by mathematical means. A validated SSI is determined when, based on a review of the data set as a whole, it can be concluded that the calculated statistical significance might be a function of a release of leachate to groundwater, and not a function of natural variability and/or other conditions.

SUMMARY OF STATISTICAL RESULTS

The statistical analysis was performed on constituents that have been historically detected, and have been detected during the current sampling event. The statistical results summarized on Table 3 and included in Appendix D indicate that:

1. The Poisson Prediction Limit and Wilcoxon tests performed for total antimony, total selenium, total silver, total thallium, acetone, carbon disulfide, and 2-butanone did not calculate SSIs; and

2. The Kruskal-Wallis tests and Shewhart-CUSUM control charts did not calculate SSIs for total arsenic, total beryllium, total cadmium, total chromium, total cobalt, total copper, total lead, total nickel, total vanadium, and total zinc.

3. The ANOVA test and Shewhart-CUSUM control charts performed for total barium calculated a SSI in well MW-2.

CONCLUSION

Concentrations of various total metals were detected in the groundwater monitoring wells and surface water sampling points during the current sampling event. Only the concentrations of lead (MW-15), copper and zinc (SW-3), pH (SW-6), and arsenic, selenium and toluene (LSP) were detected exceeding North Carolina MCLs. The remaining detected concentrations were either below North Carolina's promulgated MCLs, or MCLs have not been established for a particular constituent. Additionally, only total barium in well MW-2 was calculated to be statistically significant.

The current sampling event represents the first (N1) baseline sampling event for new wells MW-16 and MW-17 installed in association with Phase 3 and the construction of the future Phase 4. As additional laboratory data becomes available for these wells during the following sampling events, statistical methods will be used to evaluate statistical significance.

In summary, the detected concentrations of total metals are most likely naturally occurring and related to sample turbidity. Metal cations typically adsorb to the surface of platy particles (clay and silt). Therefore, turbidity of the groundwater and surface water samples will relate to detected concentrations of the metal cations. Consequently, the metal concentrations detected should be considered natural background concentrations.

We recommend that the field sampling contractor test the groundwater for turbidity prior to sample collection during future sampling events. We also recommend that sampling continue on a semi-annual basis for the *Appendix I* list of VOCs and total metals constituents.

TABLES

Table 1
Groundwater Monitoring Well Construction and Groundwater Elevation Data
White Oak Landfill
Haywood County, North Carolina
BLE Project Number J10-1957-20

October 27, 2010														
Well	**Northing (feet)**	**Easting (feet)**	**Meas. Pt. Elevation**	**Gnd. Surface Elevation**	***Depth to Water (bgs)**	**Depth to Water (bmp)**	**Water Elevation**	**Total Borehole Depth (bgs)**	**Screen Depth (bgs)**	**Screen Elevation**	**Well Type**	**Well Monitors**	**Top of Rock Depth (bgs)**	**Top of Rock Elev.**
MW-1A	721,096.30	812,481.47	2,520.02	2,517.97	18.29	20.34	2499.68	UK	10.4 - 25.4	2507.6 - 2492.6	UK	Deep Residuum	UK	UK
MW-2	721,460.76	812,309.44	2,496.71	2,494.43	28.78	31.06	2465.65	UK	19.9 - 34.9	2474.5 - 2459.5	UK	Deep Residuum/PWR	UK	UK
MW-2D	721,456.01	812,311.87	2,496.89	2,494.69	28.85	31.05	2465.84	UK	44.6 - 54.6	2450.1 - 2440.1	UK	Bedrock	36.9	2457.8
MW-3r	721,943.38	812,063.70	2,462.61	2,459.53	31.58	34.66	2427.95	41.5	26.3 - 41.3	2433.2 - 2418.2	II	Deep Residuum	NE	NE
MW-3Dr	721,940.67	812,082.82	2,461.89	2,458.42	34.65	38.12	2423.77	65.0	49.8 - 64.8	2408.6 - 2393.6	IIIs	Bedrock	44.0	2414.4
MW-4A	721,693.04	811,976.64	2,493.85	2,491.60	44.13	46.38	2447.47	UK	80.6 - 95.6	2411.0 - 2396.0	UK	Bedrock	23.3	2468.3
MW-8	721,704.50	812,155.03	2,477.33	2,474.84	29.05	31.54	2445.79	UK	31.0 - 41.0	2443.8 - 2433.8	UK	Deep Residuum	UK	UK
MW-11S	719,905.88	811,642.89	2,674.58	UK	UK	83.06	2591.52	UK	UK - UK	UK - UK	UK	UK	UK	UK
MW-11D	719,909.34	811,651.55	2,674.89	2,672.01	80.26	83.14	2591.75	UK	118.0 - 127.6	2554.0 - 2544.4	UK	Bedrock	97.0	2575.0
MW-14	UK	UK	2,711.69	UK	UK	102.95	2608.74	UK	UK - UK	UK - UK	UK	UK	UK	UK
MW-15	UK	UK	2,547.41	UK	UK	9.80	2537.61	UK	UK - UK	UK - UK	UK	UK	UK	UK
MW-16	721,821.98	811,660.70	2,519.35	2,516.07	33.22	36.50	2482.85	41.0	25.8 - 40.8	2490.3 - 2475.3	II	Fill / Residuum	40.0	2476.1
MW-17	721,783.47	811,219.93	2,542.55	2,539.13	53.63	57.05	2485.50	63.0	43.0 - 58.0	2496.1 - 2481.1	II	Bedrock	40.0	2499.1

Notes:
All survey data provided by McGill Associates, all units in feet. Data for MW-14 & MW-15 sourced from historical Municipal Engineering reports.
*DTW from bgs values have been calculated from survey data provided by McGill Associates.
All values shown to the nearest 0.1-ft have been rounded.
Water levels were measured on 10/27/10 by Pace Analytical.
MW-4A was lowered 4.59 feet by Haywood County. All bgs referenced depths for MW-4A have been adjusted accordingly on this table.

Measuring Point Elevation is top of casing.
II = Type II well
IIIs = Type III screened well
NE = Not encountered
UK = Unknown, information is not available

Prepared by: AWA
Checked by: TZS

TABLE 2

GROUNDWATER FLOW DATA
White Oak Landfill
Haywood County, North Carolina
BLE Project Number J10-1957-20

Monitoring Well	Hydraulic Conductivity			Local Hydraulic Gradient (ft/ft)	Effective Porosity	Flow Velocity (ft/day)	Flow Velocity (ft/yr)
	cm/sec	ft/min	ft/day				
MW-1A	1.50E-04	2.95E-04	4.25E-01	0.0770	0.114	0.29	104.81
MW-2	1.50E-04	2.95E-04	4.31E+00	0.0770	0.114	2.91	1,061.16
MW-4A	1.49E-04	2.93E-04	4.28E+00	0.1212	0.05	10.37	3,783.97
MW-8	1.50E-04	2.95E-04	4.31E+00	0.0770	0.114	2.91	1,061.16
MW-11S	2.40E-06	4.72E-06	6.89E-02	0.0829	0.114	0.05	18.29
MW-14	1.38E-05	2.72E-05	3.96E-01	0.0955	0.17	0.22	81.19
MW-15	2.10E-05	4.13E-05	6.03E-01	0.0917	0.17	0.33	118.73

Notes:

1. Hydraulic conductivity and effective porosity values are from prior site hydrogeologic studies performed by others.
2. Hydraulic gradients and flow velocities calculated from measurements taken during the October 27, 2010 sampling event.
3. Groundwater flow velocities calculated using the equation $V = Ki/n_e$ where
4. V = velocity
5. K = hydraulic conductivity
6. i = hydraulic gradient
7. n_e = effective porosity
8. NA = information not available

Prepared By: IAI
Reviewed by: TJB

TABLE 3

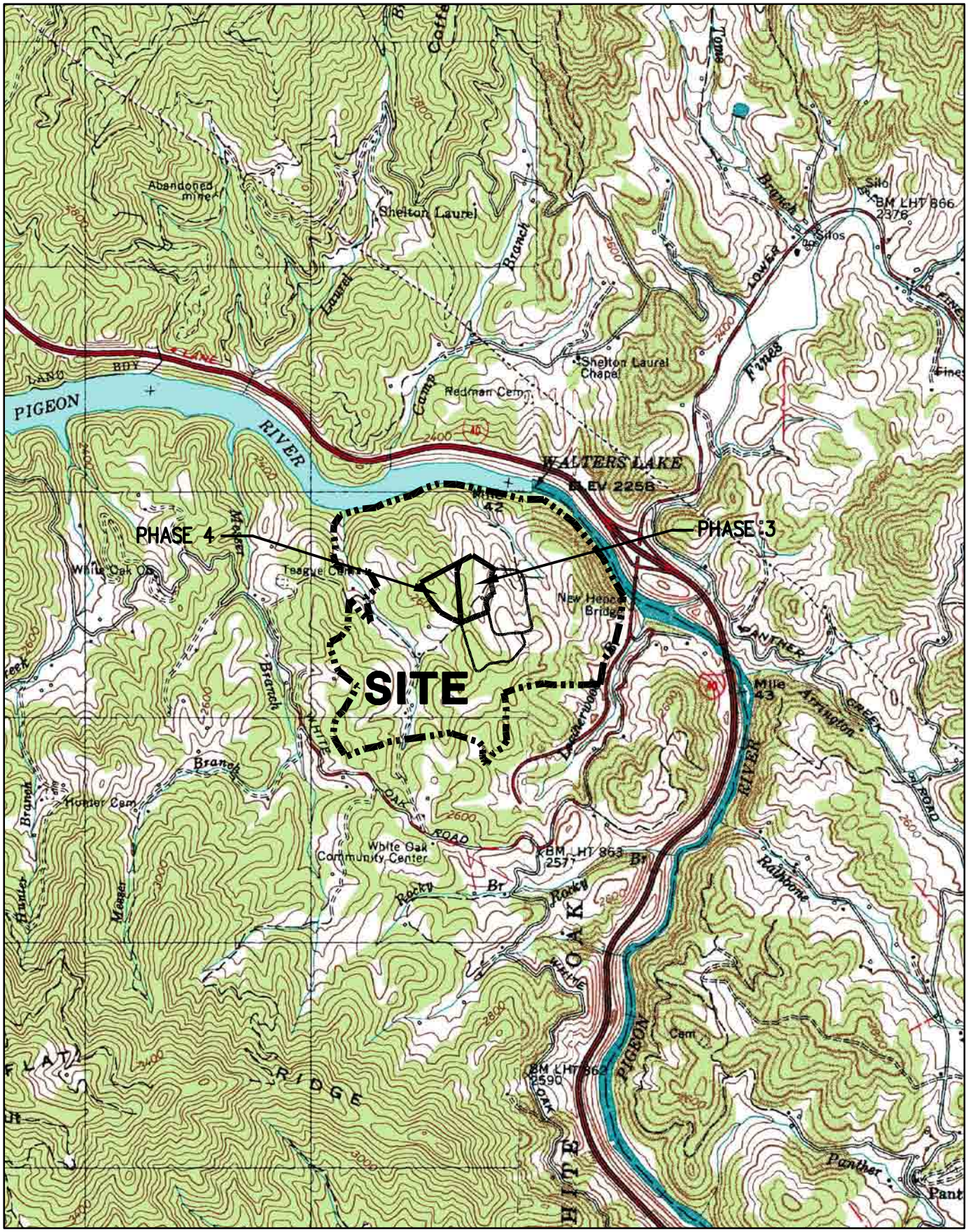
SUMMARY OF STATISTICAL ANALYSIS RESULTS
White Oak Landfill
Haywood County, North Carolina
BLE Project Number J10-1957-20

Chemical/ Compound	Percent ND	Primary Statistical Test	Primary Pass/Fail	Secondary Statistical Test	Secondary Pass/Fail	SSI Calculated	SSI Validated as Leachate	SSI Concentration Above MCL During Current Event
Total Antimony	97%	Poisson Prediction Limits	Pass	-	-	-	-	-
Total Arsenic	87%	Kruskal-Wallis	Fail	Shewhart-CUSUM	Pass	-	-	-
Total Barium	8%	ANOVA	Fail	Shewhart-CUSUM	Fail	MW-2	No	No
Total Beryllium	80%	Kruskal-Wallis	Fail	Shewhart-CUSUM	Pass	-	-	-
Total Cadmium	82%	Kruskal-Wallis	Pass	-	-	-	-	-
Total Chromium	44%	Kruskal-Wallis	Fail	Shewhart-CUSUM	Pass	-	-	-
Total Cobalt	59%	Kruskal-Wallis	Fail	Shewhart-CUSUM	Pass	-	-	-
Total Copper	55%	Kruskal-Wallis	Fail	Shewhart-CUSUM	Pass	-	-	-
Total Lead	66%	Kruskal-Wallis	Fail	Shewhart-CUSUM	Pass	-	-	-
Total Nickel	44%	Kruskal-Wallis	Fail	Shewhart-CUSUM	Pass	-	-	-
Total Selenium	98%	Poisson Prediction Limits	Pass	-	-	-	-	-
Total Silver	99%	Poisson Prediction Limits	Pass	-	-	-	-	-
Total Thallium	91%	Poisson Prediction Limits	Pass	-	-	-	-	-
Total Vanadium	46%	Kruskal-Wallis	Fail	Shewhart-CUSUM	Pass	-	-	-
Total Zinc	26%	Kruskal-Wallis	Fail	Shewhart-CUSUM	Pass	-	-	-
Acetone	99%	Poisson Prediction Limits	Pass	-	-	-	-	-
Carbon Disulfide	98%	Poisson Prediction Limits	Pass	-	-	-	-	-
2-Butanone	99%	Poisson Prediction Limits	Pass	-	-	-	-	-

Notes:
1. MCL = *Maximum Contaminant Level*
2. SSI = *Statistically Significant Increase*

Prepared By: IAI
Checked By: MSP

FIGURES

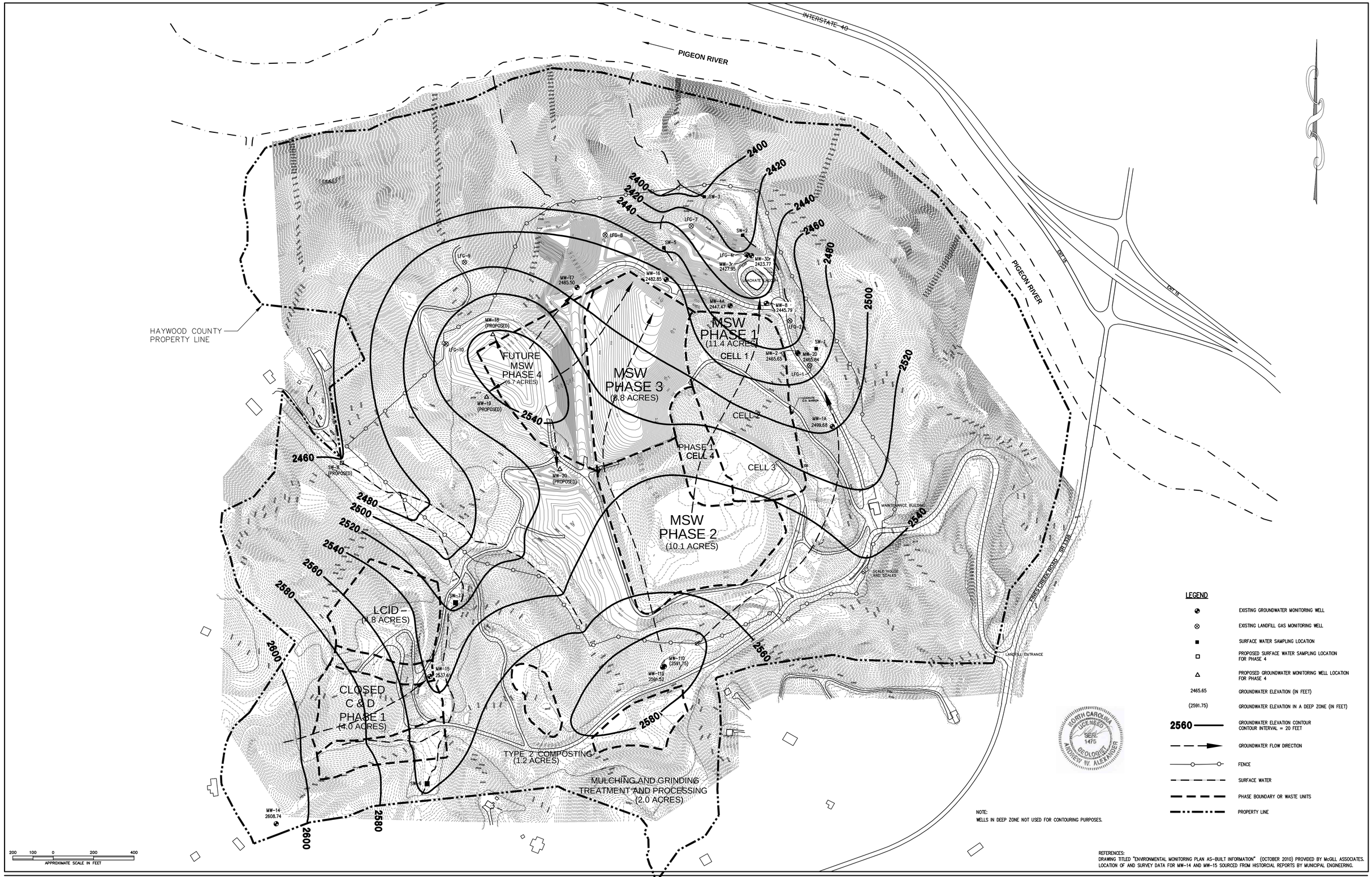


2000 1000 0 2000 4000

APPROXIMATE SCALE IN FEET

REFERENCE:
USGS TOPOGRAPHIC MAP, 7.5 MINUTE SERIES,
COVE CREEK GAP AND FINES CREEK, N.C. QUADRANGLES, 1967.

DRAWN: ACE	DATE: 12-14-10	BLE INC. BUNNELL-LAMMONS ENGINEERING, INC. 6004 PONDERS COURT GREENVILLE, SOUTH CAROLINA 29615 PHONE: (864)288-1265 FAX: (864)288-4430	SITE LOCATION MAP WHITE OAK LANDFILL HAYWOOD COUNTY, NORTH CAROLINA	FIGURE 1
CHECKED: IAI	CAD: WHITEOAK20-SLM			
APPROVED:	JOB NO: J10-1957-20			



REFERENCES:
DRAWING TITLED "ENVIRONMENTAL MONITORING PLAN AS-BUILT INFORMATION" (OCTOBER 2010) PROVIDED BY McGILL ASSOCIATES.
LOCATION OF AND SURVEY DATA FOR MW-14 AND MW-15 SOURCED FROM HISTORICAL REPORTS BY MUNICIPAL ENGINEERING.

REVISIONS		
No.	DESCRIPTION	BY

DRAWN:	ACE
CHECKED:	AWA
APPROVED:	MSP

DATE:	10-19-10
CAD FILE:	HCWOLF17-WTM102710
JOB NO:	J10-1957-17

BLE INC.
BUNNELL-LAMMONS ENGINEERING, INC.
6004 POINDEXTER COURT
GREENVILLE, SOUTH CAROLINA 29615
PHONE: (864)288-1265 FAX: (864)288-6480

GROUNDWATER ELEVATION CONTOUR MAP – OCTOBER 27, 2010
WHITE OAK LANDFILL
HAYWOOD COUNTY, NORTH CAROLINA

FIGURE NO.
2

APPENDICES

APPENDIX A

SUMMARY TABLES OF GROUNDWATER ANALYTICAL RESULTS

White Oak Landfill - Haywood Co., NC
Groundwater Sampling Event (4-24-2000)

TEST	UNITS	MDL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2A	MW-2D	MW-3A	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17	EQUIP. BLANK
pH	pH units (on-site)	-	NE	**6.9**	NS	NS	**6.1**	**5.1**	**5.1**	**6.2**	**5.9**	**5.4**	**5.2**	NS	NP	NP	NS
Specific Conductance	mmhos/cm (on-site)	1	NE	**72**	NS	NS	**69**	**55**	**51**	**89**	**85**	**89**	**100**	NS	NP	NP	NS
Temperature	°C (on-site)	-	NE	**12**	NS	NS	**13**	**14**	**14**	**12**	**12**	**13**	**13**	NS	NP	NP	NS
Turbidity	NTU (on-site)	0.1	NE	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NS
Total Antimony (Sb)	mg/l	10	NE	ND	NS	NS	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	NS
Total Arsenic (As)	mg/l	10	50	ND	NS	NS	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	NS
Total Barium (Ba)	mg/l	5	1000	**250**	NS	NS	**240**	**420**	**200**	**63**	**300**	**93**	**230**	NS	NP	NP	NS
Total Beryllium (Be)	mg/l	2	NE	**4.4**	NS	NS	ND	**2**	ND	**2.2**	ND	ND	ND	NS	NP	NP	NS
Total Cadmium (Cd)	mg/l	1	5	**2**	NS	NS	ND	**1.3**	**1.2**	**1.3**	**2.1**	ND	**5.4**	NS	NP	NP	NS
Total Chromium (Cr)	mg/l	5	50	**15**	NS	NS	**18**	**17**	**11**	ND	**26**	**5.4**	**50**	NS	NP	NP	NS
Total Cobalt (Co)	mg/l	5	NE	ND	NS	NS	ND	**8.2**	**5.4**	ND	**14**	ND	**16**	NS	NP	NP	NS
Total Copper (Cu)	mg/l	5	1000	**12**	NS	NS	ND	ND	**13**	ND	**27**	ND	**22**	NS	NP	NP	NS
Total Lead (Pb)	mg/l	10	15	**35**	NS	NS	ND	ND	ND	ND	**11**	ND	ND	NS	NP	NP	NS
Total Nickel (Ni)	mg/l	5	100	**15**	NS	NS	**17**	**12**	**8.3**	ND	**24**	**6.7**	**22**	NS	NP	NP	NS
Total Selenium (Se)	mg/l	20	50	ND	NS	NS	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	NS
Total Silver (Ag)	mg/l	2	18	**3.7**	NS	NS	ND	ND	ND	**6.9**	ND	ND	ND	NS	NP	NP	NS
Total Thallium (Tl)	mg/l	2	NE	**2**	NS	NS	ND	**3**	**2**	**4**	ND	**2**	**5**	NS	NP	NP	NS
Total Vanadium (V)	mg/l	5	NE	**17**	NS	NS	**19**	**32**	**21**	ND	**29**	**8.9**	**78**	NS	NP	NP	NS
Total Zinc (Zn)	mg/l	10	2100	**150**	NS	NS	**35**	**48**	**36**	**12**	**43**	**28**	**68**	NS	NP	NP	NS
Acetone	mg/l	100	700	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NS
Acrylonitrile	mg/l	200	NE	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NS
Benzene	mg/l	5	1	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NS
Bromochloromethane	mg/l	5	NE	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NS
Bromodichloromethane	mg/l	5	NE	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NS
Bromoform	mg/l	5	0.19	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NS
Carbon Disulfide	mg/l	100	NE	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NS
Bromomethane (Methylbromide)	mg/l	10	NE	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NS
Carbon tetrachloride	mg/l	10	0.3	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NS
Chlorobenzene (mono)	mg/l	5	50	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NS
Chloroethane	mg/l	10	NE	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NS
Chloroform	mg/l	5	0.19	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NS
Chloromethane (Methylchloride)	mg/l	10	NE	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NS
Dibromochloromethane	mg/l	5	NE	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NS
1,2-Dibromo-3-chloropropane; DBCP	mg/l	25	0.025	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NS
1,2-Dibromoethane; Ethylene dibromide	mg/l	5	0.0004	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NS
Dibromomethane	mg/l	10	NE	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NS
1,2-Dichlorobenzene	mg/l	5	620	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NS
1,4-Dichlorobenzene	mg/l	5	75	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NS
trans-1,4-Dichloro-2-butene	mg/l	100	NE	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NS
1,1-Dichloroethane	mg/l	5	700	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NS
1,2-Dichloroethane	mg/l	5	0.38	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NS
1,1-Dichloroethene (-ethylene)	mg/l	5	7	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NS
cis-1,2-Dichloroethene (-ethylene)	mg/l	5	70	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NS
trans-1,2-Dichloroethene (-ylene)	mg/l	5	70	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NS
1,2-Dichloropropane	mg/l	5	0.56	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NS
cis-1,3-Dichloropropene (-propylene)	mg/l	10	NE	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NS
trans-1,3-Dichloropropene (-propylene)	mg/l	10	NE	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NS
Ethylbenzene	mg/l	5	29	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NS
2-Hexanone	mg/l	50	NE	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NS
Iodomethane	mg/l	10	NE	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NS
Dichloromethane (Methylene chloride)	mg/l	10	5	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NS
2-Butanone (Methyl ethyl ketone)	mg/l	100	170	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NS
4-Methyl-2-Pentanone	mg/l	100	NE	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NS
Styrene	mg/l	10	100	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NS
1,1,1,2-Tetrachloroethane	mg/l	5	NE	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NS
1,1,2,2-Tetrachloroethane	mg/l	5	NE	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NS
Tetrachloroethene (-ethylene)	mg/l	5	0.7	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NS
Toluene	mg/l	5	1000	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NS
1,1,1-Trichloroethane	mg/l	5	200	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NS
1,1,2-Trichloroethane	mg/l	5	NE	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NS
Trichloroethene (-ethylene)	mg/l	5	2.8	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NS
Trichlorofluoromethane	mg/l	5	2100	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NS
1,2,3-Trichloropropane	mg/l	15	NE	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NS
Vinyl acetate	mg/l	50	NE	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NS
Vinyl chloride	mg/l	10	0.015	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NS
Xylene	mg/l	5	530	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NS

Notes:
MCL = Maximum Contaminant Level, as established in the NCDENR, Classifications of Water Quality Standards Applicable to Groundwaters of North Carolina, Section 15A NCAC 2L.202.
MDL = Laboratory Method Detection Limit
ND = Not Detected at the method detection limit
NS = Not Sampled
NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
NP = Not Present during sampling event
Shaded cells indicated exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Groundwater Sampling Event (6-26-2000)

TEST	UNITS	MDL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17	EQUIP. BLANK
pH	pH units (on-site)	-	NE	**5.9**	**6.8**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Specific Conductance	mmhos/cm (on-site)	1	NE	**29**	**60**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Temperature	°C (on-site)	-	NE	**14**	**14**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Turbidity	NTU (on-site)	0.1	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Total Antimony (Sb)	mg/l	10	NE	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Arsenic (As)	mg/l	10	50	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Barium (Ba)	mg/l	5	1000	**300**	**67**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Beryllium (Be)	mg/l	2	NE	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Cadmium (Cd)	mg/l	1	5	**1.6**	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Chromium (Cr)	mg/l	5	50	**22**	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Cobalt (Co)	mg/l	5	NE	**10**	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Copper (Cu)	mg/l	5	1000	**17**	**6**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Lead (Pb)	mg/l	10	15	ND	**10**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Nickel (Ni)	mg/l	5	100	**15**	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Selenium (Se)	mg/l	20	50	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Silver (Ag)	mg/l	2	18	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Thallium (Tl)	mg/l	2	NE	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Vanadium (V)	mg/l	5	NE	**40**	**6.3**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Zinc (Zn)	mg/l	10	2100	**37**	**12**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Acetone	mg/l	100	700	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Acrylonitrile	mg/l	200	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Benzene	mg/l	5	1	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Bromochloromethane	mg/l	5	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Bromodichloromethane	mg/l	5	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Bromoform	mg/l	5	0.19	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Carbon Disulfide	mg/l	100	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Bromomethane (Methylbromide)	mg/l	10	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Carbon tetrachloride	mg/l	10	0.3	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Chlorobenzene (mono)	mg/l	5	50	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Chloroethane	mg/l	10	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Chloroform	mg/l	5	0.19	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Chloromethane (Methylchloride)	mg/l	10	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Dibromochloromethane	mg/l	5	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,2-Dibromo-3-chloropropane; DBCP	mg/l	25	0.025	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,2-Dibromoethane; Ethylene dibromide	mg/l	5	0.0004	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Dibromomethane	mg/l	10	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,2-Dichlorobenzene	mg/l	5	620	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,4-Dichlorobenzene	mg/l	5	75	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
trans-1,4-Dichloro-2-butene	mg/l	100	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,1-Dichloroethane	mg/l	5	700	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,2-Dichloroethane	mg/l	5	0.38	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,1-Dichloroethene (-ethylene)	mg/l	5	7	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
cis-1,2-Dichloroethene (-ethylene)	mg/l	5	70	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
trans-1,2-Dichloroethene (-ylene)	mg/l	5	70	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,2-Dichloropropane	mg/l	5	0.56	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
cis-1,3-Dichloropropene (-propylene)	mg/l	10	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
trans-1,3-Dichloropropene (-propylene)	mg/l	10	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Ethylbenzene	mg/l	5	29	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
2-Hexanone	mg/l	50	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Iodomethane	mg/l	10	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Dichloromethane (Methylene chloride)	mg/l	10	5	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
2-Butanone (Methyl ethyl ketone)	mg/l	100	170	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
4-Methyl-2-Pentanone	mg/l	100	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Styrene	mg/l	10	100	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,1,1,2-Tetrachloroethane	mg/l	5	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,1,2,2-Tetrachloroethane	mg/l	5	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Tetrachloroethene (-ethylene)	mg/l	5	0.7	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Toluene	mg/l	5	1000	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,1,1-Trichloroethane	mg/l	5	200	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,1,2-Trichloroethane	mg/l	5	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Trichloroethene (-ethylene)	mg/l	5	2.8	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Trichlorofluoromethane	mg/l	5	2100	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,2,3-Trichloropropane	mg/l	15	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Vinyl acetate	mg/l	50	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Vinyl chloride	mg/l	10	0.015	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Xylene	mg/l	5	530	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT

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White Oak Landfill - Haywood Co., NC
Groundwater Sampling Event (7-26-2000)

TEST	UNITS	MDL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17	EQUIP. BLANK
pH	pH units (on-site)	-	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Specific Conductance	mmhos/cm (on-site)	1	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Temperature	°C (on-site)	-	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Turbidity	NTU (on-site)	0.1	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Total Antimony (Sb)	mg/l	10	NE	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Arsenic (As)	mg/l	10	50	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Barium (Ba)	mg/l	5	1000	**330**	**30**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Beryllium (Be)	mg/l	2	NE	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Cadmium (Cd)	mg/l	1	5	**1.1**	**3.2**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Chromium (Cr)	mg/l	5	50	**29**	**20**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Cobalt (Co)	mg/l	5	NE	**9.9**	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Copper (Cu)	mg/l	5	1000	**12**	**6.1**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Lead (Pb)	mg/l	10	15	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Nickel (Ni)	mg/l	5	100	**16**	**9.7**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Selenium (Se)	mg/l	20	50	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Silver (Ag)	mg/l	2	18	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Thallium (Tl)	mg/l	2	NE	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Vanadium (V)	mg/l	5	NE	**45**	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Zinc (Zn)	mg/l	10	2100	**65**	**66**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Acetone	mg/l	100	700	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Acrylonitrile	mg/l	200	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Benzene	mg/l	5	1	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Bromochloromethane	mg/l	5	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Bromodichloromethane	mg/l	5	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Bromoform	mg/l	5	0.19	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Carbon Disulfide	mg/l	100	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Bromomethane (Methylbromide)	mg/l	10	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Carbon tetrachloride	mg/l	10	0.3	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Chlorobenzene (mono)	mg/l	5	50	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Chloroethane	mg/l	10	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Chloroform	mg/l	5	0.19	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Chloromethane (Methylchloride)	mg/l	10	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Dibromochloromethane	mg/l	5	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,2-Dibromo-3-chloropropane; DBCP	mg/l	25	0.025	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,2-Dibromoethane; Ethylene dibromide	mg/l	5	0.0004	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Dibromomethane	mg/l	10	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,2-Dichlorobenzene	mg/l	5	620	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,4-Dichlorobenzene	mg/l	5	75	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
trans-1,4-Dichloro-2-butene	mg/l	100	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,1-Dichloroethane	mg/l	5	700	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,2-Dichloroethane	mg/l	5	0.38	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,1-Dichloroethene (-ethylene)	mg/l	5	7	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
cis-1,2-Dichloroethene (-ethylene)	mg/l	5	70	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
trans-1,2-Dichloroethene (-ylene)	mg/l	5	70	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,2-Dichloropropane	mg/l	5	0.56	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
cis-1,3-Dichloropropene (-propylene)	mg/l	10	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
trans-1,3-Dichloropropene (-propylene)	mg/l	10	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Ethylbenzene	mg/l	5	29	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
2-Hexanone	mg/l	50	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Iodomethane	mg/l	10	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Dichloromethane (Methylene chloride)	mg/l	10	5	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
2-Butanone (Methyl ethyl ketone)	mg/l	100	170	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
4-Methyl-2-Pentanone	mg/l	100	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Styrene	mg/l	10	100	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,1,1,2-Tetrachloroethane	mg/l	5	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,1,2,2-Tetrachloroethane	mg/l	5	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Tetrachloroethene (-ethylene)	mg/l	5	0.7	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Toluene	mg/l	5	1000	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,1,1-Trichloroethane	mg/l	5	200	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,1,2-Trichloroethane	mg/l	5	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Trichloroethene (-ethylene)	mg/l	5	2.8	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Trichlorofluoromethane	mg/l	5	2100	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,2,3-Trichloropropane	mg/l	15	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Vinyl acetate	mg/l	50	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Vinyl chloride	mg/l	10	0.015	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Xylene	mg/l	5	530	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT

Notes:
MCL = Maximum Contaminant Level, as established in the NCDENR, Classifications of Water Quality Standards Applicable to Groundwaters of North Carolina, Section 15A NCAC 2L.202.
MDL = Laboratory Method Detection Limit
ND = Not Detected at the method detection limit
NS = Not Sampled
NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
NP = Not Present during sampling event
Shaded cells indicated exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Groundwater Sampling Event (9-18-2000)

TEST	UNITS	MDL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17	EQUIP. BLANK
pH	pH units (on-site)	-	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
Specific Conductance	mmhos/cm (on-site)	1	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
Temperature	°C (on-site)	-	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
Turbidity	NTU (on-site)	0.1	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
Total Antimony (Sb)	mg/l	30	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	ND
Total Arsenic (As)	mg/l	10	50	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	ND
Total Barium (Ba)	mg/l	500	1000	NS	NS	NS	**330**	**92**	NS	NS	NS	NT	NS	NS	NP	NP	ND
Total Beryllium (Be)	mg/l	2	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	ND
Total Cadmium (Cd)	mg/l	1	5	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	ND
Total Chromium (Cr)	mg/l	10	50	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	ND
Total Cobalt (Co)	mg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	ND
Total Copper (Cu)	mg/l	200	1000	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	ND
Total Lead (Pb)	mg/l	10	15	NS	NS	NS	NT	NT	NS	NS	NS	ND	NS	NS	NP	NP	ND
Total Nickel (Ni)	mg/l	50	100	NS	NS	NS	**8.8**	NT	NS	NS	NS	NT	NS	NS	NP	NP	ND
Total Selenium (Se)	mg/l	20	50	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	ND
Total Silver (Ag)	mg/l	10	18	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	ND
Total Thallium (Tl)	mg/l	20	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	ND
Total Vanadium (V)	mg/l	40	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	ND
Total Zinc (Zn)	mg/l	50	2100	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	ND
Acetone	mg/l	100	700	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
Acrylonitrile	mg/l	200	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
Benzene	mg/l	5	1	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
Bromochloromethane	mg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
Bromodichloromethane	mg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
Bromoform	mg/l	5	0.19	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
Carbon Disulfide	mg/l	100	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
Bromomethane (Methylbromide)	mg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
Carbon tetrachloride	mg/l	10	0.3	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
Chlorobenzene (mono)	mg/l	5	50	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
Chloroethane	mg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
Chloroform	mg/l	5	0.19	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
Chloromethane (Methylchloride)	mg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
Dibromochloromethane	mg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
1,2-Dibromo-3-chloropropane; DBCP	mg/l	25	0.025	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
1,2-Dibromoethane; Ethylene dibromide	mg/l	5	0.0004	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
Dibromomethane	mg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
1,2-Dichlorobenzene	mg/l	5	620	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
1,4-Dichlorobenzene	mg/l	5	75	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
trans-1,4-Dichloro-2-butene	mg/l	100	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
1,1-Dichloroethane	mg/l	5	700	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
1,2-Dichloroethane	mg/l	5	0.38	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
1,1-Dichloroethene (-ethylene)	mg/l	5	7	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
cis-1,2-Dichloroethene (-ethylene)	mg/l	5	70	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
trans-1,2-Dichloroethene (-ylene)	mg/l	5	70	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
1,2-Dichloropropane	mg/l	5	0.56	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
cis-1,3-Dichloropropene (-propylene)	mg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
trans-1,3-Dichloropropene (-propylene)	mg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
Ethylbenzene	mg/l	5	29	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
2-Hexanone	mg/l	50	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
Iodomethane	mg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
Dichloromethane (Methylene chloride)	mg/l	10	5	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
2-Butanone (Methyl ethyl ketone)	mg/l	100	170	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
4-Methyl-2-Pentanone	mg/l	100	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
Styrene	mg/l	10	100	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
1,1,1,2-Tetrachloroethane	mg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
1,1,2,2-Tetrachloroethane	mg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
Tetrachloroethene (-ethylene)	mg/l	5	0.7	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
Toluene	mg/l	5	1000	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
1,1,1-Trichloroethane	mg/l	5	200	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
1,1,2-Trichloroethane	mg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
Trichloroethene (-ethylene)	mg/l	5	2.8	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
Trichlorofluoromethane	mg/l	5	2100	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
1,2,3-Trichloropropane	mg/l	15	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
Vinyl acetate	mg/l	50	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
Vinyl chloride	mg/l	10	0.015	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
Xylene	mg/l	5	530	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT

Notes:
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NP = Not Present during sampling event
Shaded cells indicated exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Groundwater Sampling Event (4-9-2001)

TEST	UNITS	MDL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17	EQUIP. BLANK
pH	pH units (on-site)	-	NE	**5.9**	**7.3**	NS	**6.4**	**6**	**6.3**	**6**	**6.1**	**8.2**	**5.8**	NS	NP	NP	NT
Specific Conductance	mmhos/cm (on-site)	1	NE	**20**	**60**	NS	**75**	**75**	**68**	**130**	**90**	**110**	**125**	NS	NP	NP	NT
Temperature	°C (on-site)	-	NE	**15**	**15**	NS	**13**	**15**	**15**	**14**	**15**	**15**	**15**	NS	NP	NP	NT
Turbidity	NTU (on-site)	0.1	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Total Antimony (Sb)	mg/l	10	NE	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
Total Arsenic (As)	mg/l	10	50	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
Total Barium (Ba)	mg/l	5	1000	**1300**	**380**	NS	**180**	**330**	**120**	**80**	**290**	**360**	**970**	NS	NP	NP	ND
Total Beryllium (Be)	mg/l	2	NE	**2.3**	**7**	NS	ND	ND	ND	ND	ND	**2.4**	**4.8**	NS	NP	NP	ND
Total Cadmium (Cd)	mg/l	1	5	**130**	**2**	NS	ND	ND	ND	**1.7**	**1.8**	**2.7**	**19**	NS	NP	NP	ND
Total Chromium (Cr)	mg/l	5	50	**130**	ND	NS	**11**	**8.4**	ND	ND	**20**	**27**	**160**	NS	NP	NP	ND
Total Cobalt (Co)	mg/l	5	NE	**54**	ND	NS	ND	ND	ND	**13**	**12**	**13**	**59**	NS	NP	NP	ND
Total Copper (Cu)	mg/l	5	1000	**77**	**8.4**	NS	ND	ND	**5.4**	ND	**26**	**38**	**110**	NS	NP	NP	ND
Total Lead (Pb)	mg/l	10	15	ND	**59**	NS	ND	ND	ND	ND	ND	**18**	**2.5**	NS	NP	NP	ND
Total Nickel (Ni)	mg/l	5	100	**76**	**7.2**	NS	**9.6**	**5.3**	ND	ND	**18**	**28**	**6.1**	NS	NP	NP	ND
Total Selenium (Se)	mg/l	20	50	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
Total Silver (Ag)	mg/l	2	18	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
Total Thallium (Tl)	mg/l	2	NE	**40**	ND	NS	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
Total Vanadium (V)	mg/l	5	NE	**250**	**1.4**	NS	**13**	**19**	**9.3**	ND	**24**	**41**	**230**	NS	NP	NP	ND
Total Zinc (Zn)	mg/l	10	2100	**230**	**130**	NS	**12**	**24**	**18**	**17**	**33**	**75**	**200**	NS	NP	NP	**24**
Acetone	mg/l	100	700	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Acrylonitrile	mg/l	200	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Benzene	mg/l	5	1	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Bromochloromethane	mg/l	5	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Bromodichloromethane	mg/l	5	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Bromoform	mg/l	5	0.19	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Carbon Disulfide	mg/l	100	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Bromomethane (Methylbromide)	mg/l	10	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Carbon tetrachloride	mg/l	10	0.3	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Chlorobenzene (mono)	mg/l	5	50	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Chloroethane	mg/l	10	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Chloroform	mg/l	5	0.19	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Chloromethane (Methylchloride)	mg/l	10	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Dibromochloromethane	mg/l	5	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
1,2-Dibromo-3-chloropropane; DBCP	mg/l	25	0.025	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
1,2-Dibromoethane; Ethylene dibromide	mg/l	5	0.0004	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Dibromomethane	mg/l	10	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
1,2-Dichlorobenzene	mg/l	5	620	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
1,4-Dichlorobenzene	mg/l	5	75	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
trans-1,4-Dichloro-2-butene	mg/l	100	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
1,1-Dichloroethane	mg/l	5	700	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
1,2-Dichloroethane	mg/l	5	0.38	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
1,1-Dichloroethene (-ethylene)	mg/l	5	7	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
cis-1,2-Dichloroethene (-ethylene)	mg/l	5	70	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
trans-1,2-Dichloroethene (-ylene)	mg/l	5	70	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
1,2-Dichloropropane	mg/l	5	0.56	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
cis-1,3-Dichloropropene (-propylene)	mg/l	10	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
trans-1,3-Dichloropropene (-propylene)	mg/l	10	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Ethylbenzene	mg/l	5	29	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
2-Hexanone	mg/l	50	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Iodomethane	mg/l	10	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Dichloromethane (Methylene chloride)	mg/l	10	5	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
2-Butanone (Methyl ethyl ketone)	mg/l	100	170	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
4-Methyl-2-Pentanone	mg/l	100	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Styrene	mg/l	10	100	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
1,1,1,2-Tetrachloroethane	mg/l	5	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
1,1,2,2-Tetrachloroethane	mg/l	5	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Tetrachloroethene (-ethylene)	mg/l	5	0.7	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Toluene	mg/l	5	1000	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
1,1,1-Trichloroethane	mg/l	5	200	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
1,1,2-Trichloroethane	mg/l	5	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Trichloroethene (-ethylene)	mg/l	5	2.8	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Trichlorofluoromethane	mg/l	5	2100	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
1,2,3-Trichloropropane	mg/l	15	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Vinyl acetate	mg/l	50	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Vinyl chloride	mg/l	10	0.015	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Xylene	mg/l	5	530	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT

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White Oak Landfill - Haywood Co., NC
Groundwater Sampling Event (9-18-2001)

TEST	UNITS	MDL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17	EQUIP. BLANK
pH	pH units (on-site)	-	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Specific Conductance	mmhos/cm (on-site)	1	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Temperature	°C (on-site)	-	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Turbidity	NTU (on-site)	0.1	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Total Antimony (Sb)	mg/l	10	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Arsenic (As)	mg/l	10	50	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Barium (Ba)	mg/l	5	1000	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Beryllium (Be)	mg/l	2	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Cadmium (Cd)	mg/l	1	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Chromium (Cr)	mg/l	5	50	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Cobalt (Co)	mg/l	5	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Copper (Cu)	mg/l	5	1000	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Lead (Pb)	mg/l	10	15	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Nickel (Ni)	mg/l	5	100	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Selenium (Se)	mg/l	20	50	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Silver (Ag)	mg/l	2	18	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Thallium (Tl)	mg/l	2	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Vanadium (V)	mg/l	5	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Zinc (Zn)	mg/l	10	2100	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Acetone	mg/l	100	700	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Acrylonitrile	mg/l	200	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Benzene	mg/l	5	1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Bromochloromethane	mg/l	5	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Bromodichloromethane	mg/l	5	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Bromoform	mg/l	5	0.19	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Carbon Disulfide	mg/l	100	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Bromomethane (Methylbromide)	mg/l	10	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Carbon tetrachloride	mg/l	10	0.3	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Chlorobenzene (mono)	mg/l	5	50	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Chloroethane	mg/l	10	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Chloroform	mg/l	5	0.19	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Chloromethane (Methylchloride)	mg/l	10	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Dibromochloromethane	mg/l	5	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,2-Dibromo-3-chloropropane; DBCP	mg/l	25	0.025	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,2-Dibromoethane; Ethylene dibromide	mg/l	5	0.0004	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Dibromomethane	mg/l	10	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,2-Dichlorobenzene	mg/l	5	620	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,4-Dichlorobenzene	mg/l	5	75	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
trans-1,4-Dichloro-2-butene	mg/l	100	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,1-Dichloroethane	mg/l	5	700	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,2-Dichloroethane	mg/l	5	0.38	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,1-Dichloroethene (-ethylene)	mg/l	5	7	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
cis-1,2-Dichloroethene (-ethylene)	mg/l	5	70	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
trans-1,2-Dichloroethene (-ylene)	mg/l	5	70	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,2-Dichloropropane	mg/l	5	0.56	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
cis-1,3-Dichloropropene (-propylene)	mg/l	10	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
trans-1,3-Dichloropropene (-propylene)	mg/l	10	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Ethylbenzene	mg/l	5	29	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
2-Hexanone	mg/l	50	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Iodomethane	mg/l	10	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Dichloromethane (Methylene chloride)	mg/l	10	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
2-Butanone (Methyl ethyl ketone)	mg/l	100	170	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
4-Methyl-2-Pentanone	mg/l	100	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Styrene	mg/l	10	100	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,1,1,2-Tetrachloroethane	mg/l	5	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,1,2,2-Tetrachloroethane	mg/l	5	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Tetrachloroethene (-ethylene)	mg/l	5	0.7	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Toluene	mg/l	5	1000	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,1,1-Trichloroethane	mg/l	5	200	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,1,2-Trichloroethane	mg/l	5	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Trichloroethene (-ethylene)	mg/l	5	2.8	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Trichlorofluoromethane	mg/l	5	2100	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,2,3-Trichloropropane	mg/l	15	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Vinyl acetate	mg/l	50	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Vinyl chloride	mg/l	10	0.015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Xylene	mg/l	5	530	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT

Notes:
MCL = Maximum Contaminant Level, as established in the NCDENR, Classifications of Water Quality Standards Applicable to Groundwaters of North Carolina, Section 15A NCAC 2L.202.
MDL = Laboratory Method Detection Limit
ND = Not Detected at the method detection limit
NS = Not Sampled
NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
NP = Not Present during sampling event
Shaded cells indicated exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Groundwater Sampling Event (10-29-2001)

TEST	UNITS	MDL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17	EQUIP. BLANK
pH	pH units (on-site)	-	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Specific Conductance	mmhos/cm (on-site)	1	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Temperature	°C (on-site)	-	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Turbidity	NTU (on-site)	0.1	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Total Antimony (Sb)	mg/l	10	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Arsenic (As)	mg/l	10	50	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Barium (Ba)	mg/l	5	1000	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Beryllium (Be)	mg/l	2	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Cadmium (Cd)	mg/l	1	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Chromium (Cr)	mg/l	5	50	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Cobalt (Co)	mg/l	5	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Copper (Cu)	mg/l	5	1000	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Lead (Pb)	mg/l	10	15	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Nickel (Ni)	mg/l	5	100	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Selenium (Se)	mg/l	20	50	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Silver (Ag)	mg/l	2	18	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Thallium (Tl)	mg/l	2	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**3.1**
Total Vanadium (V)	mg/l	5	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Zinc (Zn)	mg/l	10	2100	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Acetone	mg/l	100	700	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Acrylonitrile	mg/l	200	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Benzene	mg/l	5	1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Bromochloromethane	mg/l	5	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Bromodichloromethane	mg/l	5	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Bromoform	mg/l	5	0.19	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Carbon Disulfide	mg/l	100	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Bromomethane (Methylbromide)	mg/l	10	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Carbon tetrachloride	mg/l	10	0.3	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Chlorobenzene (mono)	mg/l	5	50	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Chloroethane	mg/l	10	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Chloroform	mg/l	5	0.19	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Chloromethane (Methylchloride)	mg/l	10	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Dibromochloromethane	mg/l	5	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,2-Dibromo-3-chloropropane; DBCP	mg/l	25	0.025	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,2-Dibromoethane; Ethylene dibromide	mg/l	5	0.0004	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Dibromomethane	mg/l	10	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,2-Dichlorobenzene	mg/l	5	620	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,4-Dichlorobenzene	mg/l	5	75	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
trans-1,4-Dichloro-2-butene	mg/l	100	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,1-Dichloroethane	mg/l	5	700	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,2-Dichloroethane	mg/l	5	0.38	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,1-Dichloroethene (-ethylene)	mg/l	5	7	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
cis-1,2-Dichloroethene (-ethylene)	mg/l	5	70	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
trans-1,2-Dichloroethene (-ylene)	mg/l	5	70	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,2-Dichloropropane	mg/l	5	0.56	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
cis-1,3-Dichloropropene (-propylene)	mg/l	10	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
trans-1,3-Dichloropropene (-propylene)	mg/l	10	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Ethylbenzene	mg/l	5	29	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
2-Hexanone	mg/l	50	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Iodomethane	mg/l	10	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Dichloromethane (Methylene chloride)	mg/l	10	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
2-Butanone (Methyl ethyl ketone)	mg/l	100	170	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
4-Methyl-2-Pentanone	mg/l	100	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Styrene	mg/l	10	100	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,1,1,2-Tetrachloroethane	mg/l	5	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,1,2,2-Tetrachloroethane	mg/l	5	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Tetrachloroethene (-ethylene)	mg/l	5	0.7	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Toluene	mg/l	5	1000	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,1,1-Trichloroethane	mg/l	5	200	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,1,2-Trichloroethane	mg/l	5	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Trichloroethene (-ethylene)	mg/l	5	2.8	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Trichlorofluoromethane	mg/l	5	2100	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,2,3-Trichloropropane	mg/l	15	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Vinyl acetate	mg/l	50	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Vinyl chloride	mg/l	10	0.015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Xylene	mg/l	5	530	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT

Notes:
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MDL = Laboratory Method Detection Limit
ND = Not Detected at the method detection limit
NS = Not Sampled
NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
NP = Not Present during sampling event
Shaded cells indicated exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Groundwater Sampling Event (1-30-2002)

TEST	UNITS	MDL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17	EQUIP. BLANK
pH	pH units (on-site)	-	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Specific Conductance	mmhos/cm (on-site)	1	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Temperature	°C (on-site)	-	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Turbidity	NTU (on-site)	0.1	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Total Antimony (Sb)	mg/l	10	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Arsenic (As)	mg/l	10	50	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Barium (Ba)	mg/l	5	1000	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Beryllium (Be)	mg/l	2	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Cadmium (Cd)	mg/l	1	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Chromium (Cr)	mg/l	5	50	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Cobalt (Co)	mg/l	5	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Copper (Cu)	mg/l	5	1000	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Lead (Pb)	mg/l	10	15	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Nickel (Ni)	mg/l	5	100	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Selenium (Se)	mg/l	20	50	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Silver (Ag)	mg/l	2	18	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Thallium (Tl)	mg/l	2	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Vanadium (V)	mg/l	5	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Zinc (Zn)	mg/l	10	2100	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Acetone	mg/l	100	700	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Acrylonitrile	mg/l	200	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Benzene	mg/l	5	1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Bromochloromethane	mg/l	5	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Bromodichloromethane	mg/l	5	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Bromoform	mg/l	5	0.19	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Carbon Disulfide	mg/l	100	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Bromomethane (Methylbromide)	mg/l	10	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Carbon tetrachloride	mg/l	10	0.3	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Chlorobenzene (mono)	mg/l	5	50	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Chloroethane	mg/l	10	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Chloroform	mg/l	5	0.19	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Chloromethane (Methylchloride)	mg/l	10	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Dibromochloromethane	mg/l	5	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,2-Dibromo-3-chloropropane; DBCP	mg/l	25	0.025	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,2-Dibromoethane; Ethylene dibromide	mg/l	5	0.0004	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Dibromomethane	mg/l	10	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,2-Dichlorobenzene	mg/l	5	620	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,4-Dichlorobenzene	mg/l	5	75	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
trans-1,4-Dichloro-2-butene	mg/l	100	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,1-Dichloroethane	mg/l	5	700	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,2-Dichloroethane	mg/l	5	0.38	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,1-Dichloroethene (-ethylene)	mg/l	5	7	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
cis-1,2-Dichloroethene (-ethylene)	mg/l	5	70	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
trans-1,2-Dichloroethene (-ylene)	mg/l	5	70	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,2-Dichloropropane	mg/l	5	0.56	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
cis-1,3-Dichloropropene (-propylene)	mg/l	10	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
trans-1,3-Dichloropropene (-propylene)	mg/l	10	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Ethylbenzene	mg/l	5	29	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
2-Hexanone	mg/l	50	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Iodomethane	mg/l	10	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Dichloromethane (Methylene chloride)	mg/l	10	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
2-Butanone (Methyl ethyl ketone)	mg/l	100	170	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
4-Methyl-2-Pentanone	mg/l	100	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Styrene	mg/l	10	100	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,1,1,2-Tetrachloroethane	mg/l	5	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,1,2,2-Tetrachloroethane	mg/l	5	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Tetrachloroethene (-ethylene)	mg/l	5	0.7	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Toluene	mg/l	5	1000	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,1,1-Trichloroethane	mg/l	5	200	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,1,2-Trichloroethane	mg/l	5	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Trichloroethene (-ethylene)	mg/l	5	2.8	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Trichlorofluoromethane	mg/l	5	2100	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,2,3-Trichloropropane	mg/l	15	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Vinyl acetate	mg/l	50	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Vinyl chloride	mg/l	10	0.015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Xylene	mg/l	5	530	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT

Notes:
MCL = Maximum Contaminant Level, as established in the NCDENR, Classifications of Water Quality Standards Applicable to Groundwaters of North Carolina, Section 15A NCAC 2L.202.
MDL = Laboratory Method Detection Limit
ND = Not Detected at the method detection limit
NS = Not Sampled
NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
NP = Not Present during sampling event
Shaded cells indicated exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Groundwater Sampling Event (2-28-2002)

TEST	UNITS	MDL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17	EQUIP. BLANK
pH	pH units (on-site)	-	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Specific Conductance	mmhos/cm (on-site)	1	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Temperature	°C (on-site)	-	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Turbidity	NTU (on-site)	0.1	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Total Antimony (Sb)	mg/l	30	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Arsenic (As)	mg/l	10	50	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Barium (Ba)	mg/l	500	1000	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Beryllium (Be)	mg/l	2	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Cadmium (Cd)	mg/l	1	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Chromium (Cr)	mg/l	10	50	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Cobalt (Co)	mg/l	10	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Copper (Cu)	mg/l	200	1000	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Lead (Pb)	mg/l	10	15	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Nickel (Ni)	mg/l	50	100	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Selenium (Se)	mg/l	20	50	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Silver (Ag)	mg/l	10	18	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Thallium (Tl)	mg/l	20	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Vanadium (V)	mg/l	40	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Zinc (Zn)	mg/l	50	2100	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Acetone	mg/l	100	700	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Acrylonitrile	mg/l	200	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Benzene	mg/l	5	1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Bromochloromethane	mg/l	5	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Bromodichloromethane	mg/l	5	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Bromoform	mg/l	5	0.19	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Carbon Disulfide	mg/l	100	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Bromomethane (Methylbromide)	mg/l	10	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Carbon tetrachloride	mg/l	10	0.3	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Chlorobenzene (mono)	mg/l	5	50	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Chloroethane	mg/l	10	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Chloroform	mg/l	5	0.19	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Chloromethane (Methylchloride)	mg/l	10	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Dibromochloromethane	mg/l	5	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,2-Dibromo-3-chloropropane; DBCP	mg/l	25	0.025	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,2-Dibromoethane; Ethylene dibromide	mg/l	5	0.0004	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Dibromomethane	mg/l	10	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,2-Dichlorobenzene	mg/l	5	620	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,4-Dichlorobenzene	mg/l	5	75	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
trans-1,4-Dichloro-2-butene	mg/l	100	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,1-Dichloroethane	mg/l	5	700	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,2-Dichloroethane	mg/l	5	0.38	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,1-Dichloroethene (-ethylene)	mg/l	5	7	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
cis-1,2-Dichloroethene (-ethylene)	mg/l	5	70	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
trans-1,2-Dichloroethene (-ylene)	mg/l	5	70	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,2-Dichloropropane	mg/l	5	0.56	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
cis-1,3-Dichloropropene (-propylene)	mg/l	10	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
trans-1,3-Dichloropropene (-propylene)	mg/l	10	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Ethylbenzene	mg/l	5	29	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
2-Hexanone	mg/l	50	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Iodomethane	mg/l	10	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Dichloromethane (Methylene chloride)	mg/l	10	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
2-Butanone (Methyl ethyl ketone)	mg/l	100	170	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
4-Methyl-2-Pentanone	mg/l	100	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Styrene	mg/l	10	100	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,1,1,2-Tetrachloroethane	mg/l	5	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,1,2,2-Tetrachloroethane	mg/l	5	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Tetrachloroethene (-ethylene)	mg/l	5	0.7	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Toluene	mg/l	5	1000	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,1,1-Trichloroethane	mg/l	5	200	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,1,2-Trichloroethane	mg/l	5	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Trichloroethene (-ethylene)	mg/l	5	2.8	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Trichlorofluoromethane	mg/l	5	2100	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,2,3-Trichloropropane	mg/l	15	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Vinyl acetate	mg/l	50	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Vinyl chloride	mg/l	10	0.015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Xylene	mg/l	5	530	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT

Notes:
MCL = Maximum Contaminant Level, as established in the NCDENR, Classifications of Water Quality Standards Applicable to Groundwaters of North Carolina, Section 15A NCAC 2L.202.
MDL = Laboratory Method Detection Limit
ND = Not Detected at the method detection limit
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NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
NP = Not Present during sampling event
Shaded cells indicated exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Groundwater Sampling Event (4-15-2002)

TEST	UNITS	MDL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17	EQUIP. BLANK
pH	pH units (on-site)	-	NE	**6.01**	**6.42**	NS	**6.46**	**5.89**	**5.25**	**5.75**	**5.68**	**6.88**	**6.01**	NS	NP	NP	NT
Specific Conductance	mmhos/cm (on-site)	1	NE	**21**	**42**	NS	**75**	**82**	**84**	**101**	**93**	**94**	**125**	NS	NP	NP	NT
Temperature	°C (on-site)	-	NE	**15.9**	**17.4**	NS	**15.3**	**15.7**	**16.8**	**16.2**	**13.2**	**16.3**	**17.3**	NS	NP	NP	NT
Turbidity	NTU (on-site)	0.1	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Total Antimony (Sb)	mg/l	10	NE	**15.0**	ND	NS	ND	ND	ND	NT	ND	ND	**11**	NS	NP	NP	ND
Total Arsenic (As)	mg/l	10	50	ND	ND	NS	ND	ND	ND	NT	ND	ND	ND	NS	NP	NP	ND
Total Barium (Ba)	mg/l	5	1000	**1300**	**41**	NS	ND	ND	**160**	**23**	**190**	**460**	**1400**	NS	NP	NP	ND
Total Beryllium (Be)	mg/l	2	NE	**2.1**	ND	NS	ND	ND	ND	ND	ND	**2.5**	**4.5**	NS	NP	NP	ND
Total Cadmium (Cd)	mg/l	10	5	**13**	ND	NS	ND	ND	ND	**4**	ND	**5.5**	**19**	NS	NP	NP	ND
Total Chromium (Cr)	mg/l	5	50	**170**	ND	NS	ND	ND	**5.7**	**7**	**10**	**56**	**180**	NS	NP	NP	ND
Total Cobalt (Co)	mg/l	5	NE	**58**	ND	NS	ND	ND	ND	**18**	**8.2**	**21**	**82**	NS	NP	NP	ND
Total Copper (Cu)	mg/l	2	1000	**69**	ND	NS	ND	ND	ND	ND	**13**	**68**	**120**	NS	NP	NP	**150**
Total Lead (Pb)	mg/l	10	15	**13**	ND	NS	ND	ND	ND	ND	ND	**13**	**29**	NS	NP	NP	ND
Total Nickel (Ni)	mg/l	5	100	**74**	ND	NS	ND	ND	ND	**6.2**	**9.2**	**44**	**68**	NS	NP	NP	ND
Total Selenium (Se)	mg/l	20	50	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
Total Silver (Ag)	mg/l	2	18	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
Total Thallium (Tl)	mg/l	2	NE	**40**	ND	NS	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
Total Vanadium (V)	mg/l	5	NE	**240**	ND	NS	ND	ND	**11**	**21**	**14**	**69**	**260**	NS	NP	NP	ND
Total Zinc (Zn)	mg/l	10	2100	**230**	**16**	NS	ND	ND	**13**	**33**	**38**	**120**	**230**	NS	NP	NP	**15**
Acetone	mg/l	100	700	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Acrylonitrile	mg/l	200	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Benzene	mg/l	5	1	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Bromochloromethane	mg/l	5	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Bromodichloromethane	mg/l	5	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Bromoform	mg/l	5	0.19	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Carbon Disulfide	mg/l	100	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Bromomethane (Methylbromide)	mg/l	10	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Carbon tetrachloride	mg/l	10	0.3	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Chlorobenzene (mono)	mg/l	5	50	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Chloroethane	mg/l	10	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Chloroform	mg/l	5	0.19	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Chloromethane (Methylchloride)	mg/l	10	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Dibromochloromethane	mg/l	5	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
1,2-Dibromo-3-chloropropane; DBCP	mg/l	25	0.025	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
1,2-Dibromoethane; Ethylene dibromide	mg/l	5	0.0004	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Dibromomethane	mg/l	10	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
1,2-Dichlorobenzene	mg/l	5	620	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
1,4-Dichlorobenzene	mg/l	5	75	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
trans-1,4-Dichloro-2-butene	mg/l	100	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
1,1-Dichloroethane	mg/l	5	700	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
1,2-Dichloroethane	mg/l	5	0.38	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
1,1-Dichloroethene (-ethylene)	mg/l	5	7	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
cis-1,2-Dichloroethene (-ethylene)	mg/l	5	70	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
trans-1,2-Dichloroethene (-ylene)	mg/l	5	70	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
1,2-Dichloropropane	mg/l	5	0.56	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
cis-1,3-Dichloropropene (-propylene)	mg/l	10	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
trans-1,3-Dichloropropene (-propylene)	mg/l	10	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Ethylbenzene	mg/l	5	29	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
2-Hexanone	mg/l	50	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Iodomethane	mg/l	10	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Dichloromethane (Methylene chloride)	mg/l	10	5	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
2-Butanone (Methyl ethyl ketone)	mg/l	100	170	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
4-Methyl-2-Pentanone	mg/l	100	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Styrene	mg/l	10	100	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
1,1,1,2-Tetrachloroethane	mg/l	5	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
1,1,2,2-Tetrachloroethane	mg/l	5	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Tetrachloroethene (-ethylene)	mg/l	5	0.7	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Toluene	mg/l	5	1000	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
1,1,1-Trichloroethane	mg/l	5	200	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
1,1,2-Trichloroethane	mg/l	5	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Trichloroethene (-ethylene)	mg/l	5	2.8	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Trichlorofluoromethane	mg/l	5	2100	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
1,2,3-Trichloropropane	mg/l	15	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Vinyl acetate	mg/l	50	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Vinyl chloride	mg/l	10	0.015	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Xylene	mg/l	5	530	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT

Notes:
MCL = Maximum Contaminant Level, as established in the NCDENR, Classifications of Water Quality Standards Applicable to Groundwaters of North Carolina, Section 15A NCAC 2L.202.
MDL = Laboratory Method Detection Limit
ND = Not Detected at the method detection limit
NS = Not Sampled
NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
NP = Not Present during sampling event
Shaded cells indicated exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Groundwater Sampling Event (9-26-2002)

TEST	UNITS	MDL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17	EQUIP. BLANK
pH	pH units (on-site)	-	NE	**6.5**	**7.3**	**7.09**	**6.14**	**6.17**	**6.18**	**5.96**	**5.96**	**7.22**	**6.37**	**6.65**	NP	NP	NT
Specific Conductance	mmhos/cm (on-site)	1	NE	**22**	**59**	**52**	**71**	**85**	**82**	**117**	**101**	**92**	**130**	**97**	NP	NP	NT
Temperature	°C (on-site)	-	NE	**15.1**	**13.5**	**13.7**	**13.5**	**13.9**	**14**	**15.8**	**14.6**	**15.1**	**17.7**	**16.6**	NP	NP	NT
Turbidity	NTU (on-site)	0.1	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Total Antimony (Sb)	mg/l	10	NE	ND	ND	ND	**12**	ND	ND	ND	ND	ND	ND	**98**	NP	NP	ND
Total Arsenic (As)	mg/l	5	50	ND	**5.7**	ND	ND	ND	ND	ND	ND	**27**	ND	**68**	NP	NP	ND
Total Barium (Ba)	mg/l	5	1000	**330**	**500**	**750**	**4200**	**120**	**230**	**93**	**410**	**910**	**1400**	**11000**	NP	NP	ND
Total Beryllium (Be)	mg/l	2	NE	ND	**7**	**2.1**	**5.1**	ND	ND	ND	ND	**8.5**	**4.7**	**95**	NP	NP	ND
Total Cadmium (Cd)	mg/l	1	5	ND	ND	**4.2**	**21**	ND	**10**	ND	**2.3**	**4.2**	**19**	**180**	NP	NP	ND
Total Chromium (Cr)	mg/l	5	50	**33**	**5.4**	**33**	**510**	ND	**5.2**	ND	**37**	**36**	**230**	**770**	NP	NP	ND
Total Cobalt (Co)	mg/l	5	NE	**13**	**5.4**	**16**	**100**	ND	**16**	**7.4**	**21**	**19**	**85**	**560**	NP	NP	ND
Total Copper (Cu)	mg/l	2	1000	**20**	**10**	**31**	**220**	ND	ND	**2.6**	**42**	**88**	**150**	**450**	NP	NP	ND
Total Lead (Pb)	mg/l	10	15	ND	**76**	**29**	ND	ND	ND	ND	ND	**150**	**20**	**740**	NP	NP	ND
Total Nickel (Ni)	mg/l	5	100	**16**	**6.8**	**31**	**400**	ND	ND	ND	**27**	**40**	**78**	**430**	NP	NP	ND
Total Selenium (Se)	mg/l	20	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Silver (Ag)	mg/l	2	18	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Thallium (Tl)	mg/l	2	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**65**	NP	NP	ND
Total Vanadium (V)	mg/l	5	NE	**58**	**16**	**44**	**640**	ND	ND	ND	**42**	**50**	**310**	**1000**	NP	NP	ND
Total Zinc (Zn)	mg/l	10	2100	**57**	**120**	**110**	**580**	ND	**20**	ND	**56**	**250**	**280**	**4800**	NP	NP	**2000**
Acetone	mg/l	100	700	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Acrylonitrile	mg/l	200	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Benzene	mg/l	5	1	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Bromochloromethane	mg/l	5	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Bromodichloromethane	mg/l	5	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Bromoform	mg/l	5	0.19	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Carbon Disulfide	mg/l	100	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Bromomethane (Methylbromide)	mg/l	10	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Carbon tetrachloride	mg/l	10	0.3	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Chlorobenzene (mono)	mg/l	5	50	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Chloroethane	mg/l	10	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Chloroform	mg/l	5	0.19	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Chloromethane (Methylchloride)	mg/l	10	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Dibromochloromethane	mg/l	5	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
1,2-Dibromo-3-chloropropane; DBCP	mg/l	25	0.025	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
1,2-Dibromoethane; Ethylene dibromide	mg/l	5	0.0004	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Dibromomethane	mg/l	10	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
1,2-Dichlorobenzene	mg/l	5	620	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
1,4-Dichlorobenzene	mg/l	5	75	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
trans-1,4-Dichloro-2-butene	mg/l	100	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
1,1-Dichloroethane	mg/l	5	700	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
1,2-Dichloroethane	mg/l	5	0.38	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
1,1-Dichloroethene (-ethylene)	mg/l	5	7	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
cis-1,2-Dichloroethene (-ethylene)	mg/l	5	70	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
trans-1,2-Dichloroethene (-ylene)	mg/l	5	70	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
1,2-Dichloropropane	mg/l	5	0.56	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
cis-1,3-Dichloropropene (-propylene)	mg/l	10	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
trans-1,3-Dichloropropene (-propylene)	mg/l	10	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Ethylbenzene	mg/l	5	29	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
2-Hexanone	mg/l	50	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Iodomethane	mg/l	10	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Dichloromethane (Methylene chloride)	mg/l	10	5	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
2-Butanone (Methyl ethyl ketone)	mg/l	100	170	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
4-Methyl-2-Pentanone	mg/l	100	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Styrene	mg/l	10	100	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
1,1,1,2-Tetrachloroethane	mg/l	5	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
1,1,2,2-Tetrachloroethane	mg/l	5	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Tetrachloroethene (-ethylene)	mg/l	5	0.7	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Toluene	mg/l	5	1000	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
1,1,1-Trichloroethane	mg/l	5	200	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
1,1,2-Trichloroethane	mg/l	5	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Trichloroethene (-ethylene)	mg/l	5	2.8	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Trichlorofluoromethane	mg/l	5	2100	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
1,2,3-Trichloropropane	mg/l	15	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Vinyl acetate	mg/l	50	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Vinyl chloride	mg/l	10	0.015	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Xylene	mg/l	5	530	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT

Notes:
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NP = Not Present during sampling event
Shaded cells indicated exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Groundwater Sampling Event (4-28-2003)

TEST	UNITS	MDL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17	EQUIP. BLANK
pH	pH units (on-site)	-	NE	**8.3**	**7.15**	**6.89**	**6.37**	**6.21**	**6.17**	**6.4**	**6.16**	**8.15**	**5.85**	**6.75**	NP	NP	NT
Specific Conductance	mmhos/cm (on-site)	1	NE	**29**	**43**	**55**	**91**	**110**	**99**	**150**	**114**	**100**	**138**	**125**	NP	NP	NT
Temperature	°C (on-site)	-	NE	**16.7**	**15.9**	**15.6**	**15.6**	**16.3**	**15.3**	**13.5**	**14.2**	**17.7**	**14.9**	**18.4**	NP	NP	NT
Turbidity	NTU (on-site)	0.1	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Total Antimony (Sb)	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Arsenic (As)	mg/l	5	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**24**	NP	NP	ND
Total Barium (Ba)	mg/l	5	1000	**600**	**66**	**220**	**1800**	**160**	**140**	**110**	**92**	**360**	**800**	**2800**	NP	NP	ND
Total Beryllium (Be)	mg/l	2	NE	ND	ND	ND	ND	ND	ND	ND	ND	**2**	**2.2**	**20**	NP	NP	ND
Total Cadmium (Cd)	mg/l	1	5	**3.6**	ND	ND	**6**	ND	ND	ND	ND	**2.9**	**16**	**20**	NP	NP	ND
Total Chromium (Cr)	mg/l	5	50	ND	ND	ND	**89**	ND	ND	ND	ND	ND	**110**	**27**	NP	NP	ND
Total Cobalt (Co)	mg/l	5	NE	**21**	ND	ND	**37**	ND	ND	**6.9**	ND	**17**	**50**	**81**	NP	NP	ND
Total Copper (Cu)	mg/l	2	1000	**24**	ND	**2.6**	**40**	ND	ND	ND	ND	**28**	**94**	**71**	NP	NP	ND
Total Lead (Pb)	mg/l	10	15	ND	ND	ND	ND	ND	ND	ND	ND	**25**	ND	**300**	NP	NP	ND
Total Nickel (Ni)	mg/l	5	100	ND	ND	ND	**90**	ND	ND	ND	ND	ND	**26**	**70**	NP	NP	ND
Total Selenium (Se)	mg/l	20	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Silver (Ag)	mg/l	2	18	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Thallium (Tl)	mg/l	1	NE	ND	ND	ND	**1.6**	ND	ND	ND	ND	**1.4**	ND	**15**	NP	NP	ND
Total Vanadium (V)	mg/l	5	NE	**89**	ND	**9.6**	**170**	**6.8**	**6.8**	ND	ND	**37**	**230**	**130**	NP	NP	ND
Total Zinc (Zn)	mg/l	10	2100	**86**	**14**	**31**	**160**	**16**	ND	ND	ND	**81**	**190**	**800**	NP	NP	ND
Acetone	mg/l	100	700	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Acrylonitrile	mg/l	200	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Benzene	mg/l	5	1	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Bromochloromethane	mg/l	5	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Bromodichloromethane	mg/l	5	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Bromoform	mg/l	5	0.19	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Carbon Disulfide	mg/l	100	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Bromomethane (Methylbromide)	mg/l	10	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Carbon tetrachloride	mg/l	10	0.3	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Chlorobenzene (mono)	mg/l	5	50	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Chloroethane	mg/l	10	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Chloroform	mg/l	5	0.19	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Chloromethane (Methylchloride)	mg/l	10	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Dibromochloromethane	mg/l	5	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
1,2-Dibromo-3-chloropropane; DBCP	mg/l	25	0.025	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
1,2-Dibromoethane; Ethylene dibromide	mg/l	5	0.0004	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Dibromomethane	mg/l	10	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
1,2-Dichlorobenzene	mg/l	5	620	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
1,4-Dichlorobenzene	mg/l	5	75	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
trans-1,4-Dichloro-2-butene	mg/l	100	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
1,1-Dichloroethane	mg/l	5	700	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
1,2-Dichloroethane	mg/l	5	0.38	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
1,1-Dichloroethene (-ethylene)	mg/l	5	7	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
cis-1,2-Dichloroethene (-ethylene)	mg/l	5	70	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
trans-1,2-Dichloroethene (-ylene)	mg/l	5	70	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
1,2-Dichloropropane	mg/l	5	0.56	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
cis-1,3-Dichloropropene (-propylene)	mg/l	10	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
trans-1,3-Dichloropropene (-propylene)	mg/l	10	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Ethylbenzene	mg/l	5	29	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
2-Hexanone	mg/l	50	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Iodomethane	mg/l	10	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Dichloromethane (Methylene chloride)	mg/l	10	5	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
2-Butanone (Methyl ethyl ketone)	mg/l	100	170	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
4-Methyl-2-Pentanone	mg/l	100	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Styrene	mg/l	10	100	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
1,1,1,2-Tetrachloroethane	mg/l	5	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
1,1,2,2-Tetrachloroethane	mg/l	5	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Tetrachloroethene (-ethylene)	mg/l	5	0.7	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Toluene	mg/l	5	1000	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
1,1,1-Trichloroethane	mg/l	5	200	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
1,1,2-Trichloroethane	mg/l	5	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Trichloroethene (-ethylene)	mg/l	5	2.8	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Trichlorofluoromethane	mg/l	5	2100	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
1,2,3-Trichloropropane	mg/l	15	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Vinyl acetate	mg/l	50	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Vinyl chloride	mg/l	10	0.015	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Xylene	mg/l	5	530	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT

Notes:
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NP = Not Present during sampling event
Shaded cells indicated exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Groundwater Sampling Event (10-30-2003)

TEST	UNITS	MDL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17	EQUIP. BLANK
pH	pH units (on-site)	-	NE	**6.58**	**6.9**	**6.73**	**6.57**	**6.26**	**6.44**	**6.33**	**6.27**	**7.7**	**6.18**	**6.46**	NP	NP	NT
Specific Conductance	mmhos/cm (on-site)	1	NE	**29**	**39**	**58**	**82**	**119**	**110**	**140**	**115**	**105**	**149**	**120**	NP	NP	NT
Temperature	°C (on-site)	-	NE	**15**	**15.1**	**14.9**	**15.8**	**15.9**	**16.7**	**15**	**14**	**17.5**	**16.3**	**16**	NP	NP	NT
Turbidity	NTU (on-site)	0.1	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Total Antimony (Sb)	mg/l	5	NE	ND	ND	NT	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Arsenic (As)	mg/l	5	50	ND	ND	NT	ND	ND	ND	ND	ND	ND	**5.3**	**81**	NP	NP	ND
Total Barium (Ba)	mg/l	5	1000	**320**	**100**	NT	**210**	**310**	**130**	**95**	**110**	**1200**	**270**	**4900**	NP	NP	ND
Total Beryllium (Be)	mg/l	1	NE	ND	ND	NT	ND	ND	ND	ND	ND	**2.4**	ND	**33**	NP	NP	ND
Total Cadmium (Cd)	mg/l	1	5	ND	ND	NT	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Chromium (Cr)	mg/l	2	50	**30**	ND	NT	ND	**6.2**	ND	ND	ND	**31**	**4.6**	**140**	NP	NP	ND
Total Cobalt (Co)	mg/l	5	NE	**9**	ND	NT	ND	ND	ND	**5.7**	ND	**52**	**8.8**	**110**	NP	NP	ND
Total Copper (Cu)	mg/l	2	1000	**18**	ND	NT	ND	**2.3**	**2.6**	ND	**3**	**85**	**4.4**	**150**	NP	NP	ND
Total Lead (Pb)	mg/l	5	15	**8.7**	**12**	NT	ND	ND	ND	ND	ND	**39**	**7.4**	**640**	NP	NP	ND
Total Nickel (Ni)	mg/l	5	100	**19**	ND	NT	**6.9**	**6.9**	ND	ND	ND	**48**	ND	**190**	NP	NP	ND
Total Selenium (Se)	mg/l	5	50	ND	ND	NT	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Silver (Ag)	mg/l	2	18	ND	ND	NT	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Thallium (Tl)	mg/l	10	NE	ND	ND	NT	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Vanadium (V)	mg/l	5	NE	**54**	ND	NT	**6.6**	**16**	ND	ND	ND	**92**	**14**	**200**	NP	NP	ND
Total Zinc (Zn)	mg/l	10	2100	**55**	**22**	NT	**17**	**26**	**10**	ND	ND	**140**	**26**	**1800**	NP	NP	ND
Acetone	mg/l	10	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Acrylonitrile	mg/l	25	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Benzene	mg/l	5	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromochloromethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromodichloromethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromoform	mg/l	5	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Carbon Disulfide	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromomethane (Methylbromide)	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Carbon tetrachloride	mg/l	5	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chlorobenzene (mono)	mg/l	5	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chloroethane	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chloroform	mg/l	5	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chloromethane (Methylchloride)	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Dibromochloromethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dibromo-3-chloropropane; DBCP	mg/l	5	0.025	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dibromoethane; Ethylene dibromide	mg/l	5	0.0004	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Dibromomethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dichlorobenzene	mg/l	5	620	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,4-Dichlorobenzene	mg/l	5	75	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
trans-1,4-Dichloro-2-butene	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1-Dichloroethane	mg/l	5	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dichloroethane	mg/l	5	0.38	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1-Dichloroethene (-ethylene)	mg/l	5	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
cis-1,2-Dichloroethene (-ethylene)	mg/l	5	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
trans-1,2-Dichloroethene (-ylene)	mg/l	5	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dichloropropane	mg/l	5	0.56	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
cis-1,3-Dichloropropene (-propylene)	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
trans-1,3-Dichloropropene (-propylene)	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Ethylbenzene	mg/l	5	29	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
2-Hexanone	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Iodomethane	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Dichloromethane (Methylene chloride)	mg/l	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
2-Butanone (Methyl ethyl ketone)	mg/l	10	170	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
4-Methyl-2-Pentanone	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Styrene	mg/l	5	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,1,2-Tetrachloroethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,2,2-Tetrachloroethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Tetrachloroethene (-ethylene)	mg/l	5	0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Toluene	mg/l	5	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,1-Trichloroethane	mg/l	5	200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,2-Trichloroethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Trichloroethene (-ethylene)	mg/l	5	2.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Trichlorofluoromethane	mg/l	5	2100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2,3-Trichloropropane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Vinyl acetate	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Vinyl chloride	mg/l	5	0.015	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Xylene	mg/l	5	530	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND

Notes:
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MDL = Laboratory Method Detection Limit
ND = Not Detected at the method detection limit
NS = Not Sampled
NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
NP = Not Present during sampling event
Shaded cells indicated exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Groundwater Sampling Event (4-20-2004)

TEST	UNITS	MDL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17	EQUIP. BLANK
pH	pH units (on-site)	-	NE	**6.71**	**6.81**	**6.78**	**5.57**	**5.4**	**5.47**	**5.47**	**5.41**	**7.36**	**5.17**	**6.83**	NP	NP	NT
Specific Conductance	mmhos/cm (on-site)	1	NE	**25**	**31**	**40**	**67**	**135**	**120**	**115**	**100**	**100**	**115**	**70**	NP	NP	NT
Temperature	°C (on-site)	-	NE	**15.8**	**15.6**	**15.5**	**13.5**	**14.6**	**14.4**	**13.5**	**14.1**	**15.3**	**14.9**	**13.8**	NP	NP	NT
Turbidity	NTU (on-site)	0.1	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Total Antimony (Sb)	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Arsenic (As)	mg/l	5	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	**7.4**	**30**	NP	NP	ND
Total Barium (Ba)	mg/l	5	1000	**320**	**56**	**120**	**410**	**460**	**170**	**140**	**210**	**62**	**940**	**2000**	NP	NP	ND
Total Beryllium (Be)	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**21**	NP	NP	ND
Total Cadmium (Cd)	mg/l	1	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	**8.8**	**8.9**	NP	NP	ND
Total Chromium (Cr)	mg/l	2	50	**33**	ND	**2.1**	**45**	**13**	ND	ND	**11**	**3.5**	**190**	**68**	NP	NP	ND
Total Cobalt (Co)	mg/l	5	NE	**9.5**	ND	ND	**7.7**	**5.2**	ND	**13**	**6.4**	ND	**43**	**50**	NP	NP	ND
Total Copper (Cu)	mg/l	2	1000	**18**	ND	**2.8**	**12**	**5.3**	**2.3**	**4.3**	**13**	**7.4**	**100**	**89**	NP	NP	ND
Total Lead (Pb)	mg/l	5	15	**7.2**	**7**	**5.2**	**6.4**	**5.4**	ND	ND	ND	**12**	**39**	**250**	NP	NP	ND
Total Nickel (Ni)	mg/l	5	100	**20**	ND	ND	**30**	**7.3**	ND	ND	**12**	**5.3**	**49**	**110**	NP	NP	ND
Total Selenium (Se)	mg/l	5	50	ND	ND	ND	ND	ND	**5**	ND	ND	ND	ND	ND	NP	NP	ND
Total Silver (Ag)	mg/l	2	18	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Thallium (Tl)	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Vanadium (V)	mg/l	5	NE	**55**	ND	ND	**45**	**25**	ND	ND	**13**	**5.1**	**240**	**88**	NP	NP	ND
Total Zinc (Zn)	mg/l	10	2100	**55**	**10**	ND	**44**	**30**	**11**	**14**	**19**	**23**	**220**	**770**	NP	NP	**11**
Acetone	mg/l	10	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
Acrylonitrile	mg/l	25	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
Benzene	mg/l	5	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
Bromochloromethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
Bromodichloromethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
Bromoform	mg/l	5	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
Carbon Disulfide	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
Bromomethane (Methylbromide)	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
Carbon tetrachloride	mg/l	5	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
Chlorobenzene (mono)	mg/l	5	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
Chloroethane	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
Chloroform	mg/l	5	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
Chloromethane (Methylchloride)	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
Dibromochloromethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
1,2-Dibromo-3-chloropropane; DBCP	mg/l	5	0.025	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
1,2-Dibromoethane; Ethylene dibromide	mg/l	5	0.0004	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
Dibromomethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
1,2-Dichlorobenzene	mg/l	5	620	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
1,4-Dichlorobenzene	mg/l	5	75	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
trans-1,4-Dichloro-2-butene	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
1,1-Dichloroethane	mg/l	5	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
1,2-Dichloroethane	mg/l	5	0.38	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
1,1-Dichloroethene (-ethylene)	mg/l	5	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
cis-1,2-Dichloroethene (-ethylene)	mg/l	5	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
trans-1,2-Dichloroethene (-ylene)	mg/l	5	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
1,2-Dichloropropane	mg/l	5	0.56	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
cis-1,3-Dichloropropene (-propylene)	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
trans-1,3-Dichloropropene (-propylene)	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
Ethylbenzene	mg/l	5	29	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
2-Hexanone	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
Iodomethane	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
Dichloromethane (Methylene chloride)	mg/l	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
2-Butanone (Methyl ethyl ketone)	mg/l	10	170	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
4-Methyl-2-Pentanone	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
Styrene	mg/l	5	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
1,1,1,2-Tetrachloroethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
1,1,2,2-Tetrachloroethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
Tetrachloroethene (-ethylene)	mg/l	5	0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
Toluene	mg/l	5	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
1,1,1-Trichloroethane	mg/l	5	200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
1,1,2-Trichloroethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
Trichloroethene (-ethylene)	mg/l	5	2.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
Trichlorofluoromethane	mg/l	5	2100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
1,2,3-Trichloropropane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
Vinyl acetate	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
Vinyl chloride	mg/l	5	0.015	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
Xylene	mg/l	5	530	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT

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White Oak Landfill - Haywood Co., NC
Groundwater Sampling Event (10-21-2004)

TEST	UNITS	MDL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17	EQUIP. BLANK
pH	pH units (on-site)	-	NE	**6.83**	**6.55**	**6.76**	**6.9**	**5.92**	**6.39**	**5.75**	**6.03**	**7.84**	**5.57**	**7.12**	NP	NP	NT
Specific Conductance	mmhos/cm (on-site)	1	NE	**29**	**49**	**62**	**96**	**290**	**302**	**196**	**148**	**111**	**198**	**134**	NP	NP	NT
Temperature	°C (on-site)	-	NE	**14.3**	**16.7**	**14**	**13**	**14.7**	**14.3**	**15**	**14.5**	**14.2**	**14.6**	**17**	NP	NP	NT
Turbidity	NTU (on-site)	0.1	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Total Antimony (Sb)	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Arsenic (As)	mg/l	5	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**59**	NP	NP	ND
Total Barium (Ba)	mg/l	5	1000	**320**	**40**	**200**	**300**	**310**	**140**	**140**	**130**	**12**	**900**	**4900**	NP	NP	ND
Total Beryllium (Be)	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1.4**	**28**	NP	NP	ND
Total Cadmium (Cd)	mg/l	1	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Chromium (Cr)	mg/l	2	50	**21**	ND	**2.8**	**16**	**2**	ND	ND	ND	ND	**120**	**140**	NP	NP	ND
Total Cobalt (Co)	mg/l	5	NE	**6.2**	ND	ND	ND	ND	ND	ND	ND	ND	**31**	**120**	NP	NP	ND
Total Copper (Cu)	mg/l	2	1000	**11**	ND	ND	**2**	ND	ND	ND	ND	ND	**63**	**140**	NP	NP	ND
Total Lead (Pb)	mg/l	5	15	**7.2**	**5.6**	**5.7**	ND	ND	ND	ND	ND	ND	**24**	**430**	NP	NP	ND
Total Nickel (Ni)	mg/l	5	100	**12**	ND	ND	**13**	ND	ND	ND	ND	ND	**35**	**160**	NP	NP	ND
Total Selenium (Se)	mg/l	5	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Silver (Ag)	mg/l	2	18	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Thallium (Tl)	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Vanadium (V)	mg/l	5	NE	**41**	ND	ND	**18**	ND	ND	ND	ND	ND	**160**	**210**	NP	NP	ND
Total Zinc (Zn)	mg/l	10	2100	**29**	ND	ND	**17**	ND	**14**	ND	**12**	**15**	**70**	**1200**	NP	NP	ND
Acetone	mg/l	10	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Acrylonitrile	mg/l	25	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Benzene	mg/l	5	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromochloromethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromodichloromethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromoform	mg/l	5	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Carbon Disulfide	mg/l	10	NE	ND	**24**	ND	ND	ND	ND	ND	ND	**15**	ND	ND	NP	NP	ND
Bromomethane (Methylbromide)	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Carbon tetrachloride	mg/l	5	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chlorobenzene (mono)	mg/l	5	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chloroethane	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chloroform	mg/l	5	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chloromethane (Methylchloride)	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Dibromochloromethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dibromo-3-chloropropane; DBCP	mg/l	5	0.025	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dibromoethane; Ethylene dibromide	mg/l	5	0.0004	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Dibromomethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dichlorobenzene	mg/l	5	620	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,4-Dichlorobenzene	mg/l	5	75	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
trans-1,4-Dichloro-2-butene	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1-Dichloroethane	mg/l	5	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dichloroethane	mg/l	5	0.38	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1-Dichloroethene (-ethylene)	mg/l	5	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
cis-1,2-Dichloroethene (-ethylene)	mg/l	5	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
trans-1,2-Dichloroethene (-ylene)	mg/l	5	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dichloropropane	mg/l	5	0.56	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
cis-1,3-Dichloropropene (-propylene)	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
trans-1,3-Dichloropropene (-propylene)	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Ethylbenzene	mg/l	5	29	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
2-Hexanone	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Iodomethane	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Dichloromethane (Methylene chloride)	mg/l	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
2-Butanone (Methyl ethyl ketone)	mg/l	10	170	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
4-Methyl-2-Pentanone	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Styrene	mg/l	5	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,1,2-Tetrachloroethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,2,2-Tetrachloroethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Tetrachloroethene (-ethylene)	mg/l	5	0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Toluene	mg/l	5	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,1-Trichloroethane	mg/l	5	200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,2-Trichloroethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Trichloroethene (-ethylene)	mg/l	5	2.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Trichlorofluoromethane	mg/l	5	2100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2,3-Trichloropropane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Vinyl acetate	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Vinyl chloride	mg/l	5	0.015	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Xylene	mg/l	5	530	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND

Notes:
MCL = Maximum Contaminant Level, as established in the NCDENR, Classifications of Water Quality Standards Applicable to Groundwaters of North Carolina, Section 15A NCAC 2L.202.
MDL = Laboratory Method Detection Limit
ND = Not Detected at the method detection limit
NS = Not Sampled
NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
NP = Not Present during sampling event
Shaded cells indicated exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Groundwater Sampling Event (4-18-2005)

TEST	UNITS	MDL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17	EQUIP. BLANK
pH	pH units (on-site)	-	NE	**6.95**	**7.44**	**6.15**	**6.2**	**5.58**	**6.04**	**6.02**	**6.18**	**7.46**	**5.6**	**6.85**	NP	NP	NT
Specific Conductance	mmhos/cm (on-site)	1	NE	**25**	**40**	**42**	**78**	**330**	**161**	**171**	**139**	**95**	**149**	**138**	NP	NP	NT
Temperature	°C (on-site)	-	NE	**14.2**	**15.6**	**15**	**13.5**	**15**	**17.7**	**13**	**13.5**	**16.2**	**14.1**	**16.4**	NP	NP	NT
Turbidity	NTU (on-site)	0.1	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Total Antimony (Sb)	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**12**	NP	NP	ND
Total Arsenic (As)	mg/l	5	50	ND	ND	ND	**10**	ND	ND	ND	ND	ND	**5.2**	**65**	NP	NP	ND
Total Barium (Ba)	mg/l	5	1000	**480**	**55**	**160**	**7200**	**610**	**180**	**160**	**140**	**12**	**1000**	**3700**	NP	NP	ND
Total Beryllium (Be)	mg/l	1	NE	ND	ND	ND	**7.2**	ND	ND	ND	ND	ND	**3.8**	**26**	NP	NP	ND
Total Cadmium (Cd)	mg/l	1	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Chromium (Cr)	mg/l	2	50	**49**	**12**	**8.3**	**680**	**2.9**	ND	ND	**3.2**	ND	**210**	**100**	NP	NP	ND
Total Cobalt (Co)	mg/l	5	NE	**12**	ND	ND	**110**	ND	ND	ND	ND	ND	**36**	**70**	NP	NP	ND
Total Copper (Cu)	mg/l	2	1000	**29**	ND	ND	**240**	ND	ND	ND	**3.8**	ND	**120**	**130**	NP	NP	ND
Total Lead (Pb)	mg/l	5	15	**13**	**8**	**5.2**	**73**	ND	ND	ND	ND	ND	**39**	**380**	NP	NP	ND
Total Nickel (Ni)	mg/l	5	100	**29**	**9.6**	**17**	**460**	ND	ND	**5.5**	**5.4**	ND	**59**	**170**	NP	NP	ND
Total Selenium (Se)	mg/l	5	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Silver (Ag)	mg/l	2	18	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Thallium (Tl)	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Vanadium (V)	mg/l	5	NE	**85**	ND	ND	**680**	**5.4**	ND	ND	ND	ND	**240**	**110**	NP	NP	ND
Total Zinc (Zn)	mg/l	10	2100	**83**	ND	ND	**780**	ND	**30**	**13**	**10**	ND	**240**	**1200**	NP	NP	ND
Acetone	mg/l	25	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Acrylonitrile	mg/l	25	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Benzene	mg/l	5	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromochloromethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromodichloromethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromoform	mg/l	5	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Carbon Disulfide	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromomethane (Methylbromide)	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Carbon tetrachloride	mg/l	5	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chlorobenzene (mono)	mg/l	5	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chloroethane	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chloroform	mg/l	5	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chloromethane (Methylchloride)	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Dibromochloromethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dibromo-3-chloropropane; DBCP	mg/l	5	0.025	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dibromoethane; Ethylene dibromide	mg/l	5	0.0004	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Dibromomethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dichlorobenzene	mg/l	5	620	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,4-Dichlorobenzene	mg/l	5	75	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
trans-1,4-Dichloro-2-butene	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1-Dichloroethane	mg/l	5	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dichloroethane	mg/l	5	0.38	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1-Dichloroethene (-ethylene)	mg/l	5	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
cis-1,2-Dichloroethene (-ethylene)	mg/l	5	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
trans-1,2-Dichloroethene (-ylene)	mg/l	5	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dichloropropane	mg/l	5	0.56	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
cis-1,3-Dichloropropene (-propylene)	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
trans-1,3-Dichloropropene (-propylene)	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Ethylbenzene	mg/l	5	29	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
2-Hexanone	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Iodomethane	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Dichloromethane (Methylene chloride)	mg/l	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
2-Butanone (Methyl ethyl ketone)	mg/l	10	170	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
4-Methyl-2-Pentanone	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Styrene	mg/l	5	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,1,2-Tetrachloroethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,2,2-Tetrachloroethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Tetrachloroethene (-ethylene)	mg/l	5	0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Toluene	mg/l	5	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,1-Trichloroethane	mg/l	5	200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,2-Trichloroethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Trichloroethene (-ethylene)	mg/l	5	2.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Trichlorofluoromethane	mg/l	5	2100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2,3-Trichloropropane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Vinyl acetate	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Vinyl chloride	mg/l	5	0.015	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Xylene	mg/l	5	530	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND

Notes:
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MDL = Laboratory Method Detection Limit
ND = Not Detected at the method detection limit
NS = Not Sampled
NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
NP = Not Present during sampling event
Shaded cells indicated exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Groundwater Sampling Event (10-13-2005)

TEST	UNITS	MDL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17	EQUIP. BLANK
pH	pH units (on-site)	-	NE	**7.21**	**7.38**	**7.79**	**6.36**	**6.07**	**6.25**	**6.08**	**6.6**	**7.73**	**6.08**	**6.72**	NP	NP	NT
Specific Conductance	mmhos/cm (on-site)	1	NE	**21**	**35**	**40**	**85**	**580**	**201**	**185**	**160**	**102**	**180**	**52**	NP	NP	NT
Temperature	°C (on-site)	-	NE	**13.2**	**14**	**13.3**	**13.3**	**14.9**	**14.3**	**16.5**	**15.5**	**15.3**	**16.5**	**16.8**	NP	NP	NT
Turbidity	NTU (on-site)	0.1	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Total Antimony (Sb)	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Arsenic (As)	mg/l	5	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**44**	NP	NP	ND
Total Barium (Ba)	mg/l	5	1000	**770**	**37**	**160**	**1700**	**870**	**250**	**160**	**140**	**27**	**810**	**2700**	NP	NP	ND
Total Beryllium (Be)	mg/l	1	NE	ND	ND	ND	**3**	ND	ND	ND	ND	ND	**3.4**	**21**	NP	NP	ND
Total Cadmium (Cd)	mg/l	1	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Chromium (Cr)	mg/l	2	50	**52**	ND	**3.7**	**230**	**4.7**	ND	ND	ND	ND	**150**	**88**	NP	NP	ND
Total Cobalt (Co)	mg/l	5	NE	**21**	ND	ND	**32**	ND	ND	**5.1**	ND	ND	**29**	**56**	NP	NP	ND
Total Copper (Cu)	mg/l	2	1000	**31**	**2.6**	**3.5**	**70**	ND	ND	ND	ND	**3**	**82**	**96**	NP	NP	ND
Total Lead (Pb)	mg/l	5	15	**14**	**6.9**	ND	**20**	ND	ND	ND	ND	ND	**29**	**290**	NP	NP	ND
Total Nickel (Ni)	mg/l	5	100	**29**	ND	ND	**160**	**6.8**	ND	ND	**6.1**	ND	**46**	**100**	NP	NP	ND
Total Selenium (Se)	mg/l	5	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Silver (Ag)	mg/l	2	18	**2.9**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Thallium (Tl)	mg/l	10	NE	**22**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Vanadium (V)	mg/l	5	NE	**82**	ND	ND	**210**	**8.9**	ND	ND	ND	ND	**170**	**82**	NP	NP	ND
Total Zinc (Zn)	mg/l	10	2100	**92**	**13**	**12**	**230**	**19**	**25**	ND	ND	**14**	**170**	**800**	NP	NP	ND
Acetone	mg/l	25	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Acrylonitrile	mg/l	25	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Benzene	mg/l	5	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromochloromethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromodichloromethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromoform	mg/l	5	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Carbon Disulfide	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromomethane (Methylbromide)	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Carbon tetrachloride	mg/l	5	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chlorobenzene (mono)	mg/l	5	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chloroethane	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chloroform	mg/l	5	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chloromethane (Methylchloride)	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Dibromochloromethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dibromo-3-chloropropane; DBCP	mg/l	5	0.025	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dibromoethane; Ethylene dibromide	mg/l	5	0.0004	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Dibromomethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dichlorobenzene	mg/l	5	620	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,4-Dichlorobenzene	mg/l	5	75	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
trans-1,4-Dichloro-2-butene	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1-Dichloroethane	mg/l	5	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dichloroethane	mg/l	5	0.38	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1-Dichloroethene (-ethylene)	mg/l	5	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
cis-1,2-Dichloroethene (-ethylene)	mg/l	5	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
trans-1,2-Dichloroethene (-ylene)	mg/l	5	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dichloropropane	mg/l	5	0.56	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
cis-1,3-Dichloropropene (-propylene)	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
trans-1,3-Dichloropropene (-propylene)	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Ethylbenzene	mg/l	5	29	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
2-Hexanone	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Iodomethane	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Dichloromethane (Methylene chloride)	mg/l	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
2-Butanone (Methyl ethyl ketone)	mg/l	10	170	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
4-Methyl-2-Pentanone	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Styrene	mg/l	5	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,1,2-Tetrachloroethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,2,2-Tetrachloroethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Tetrachloroethene (-ethylene)	mg/l	5	0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Toluene	mg/l	5	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,1-Trichloroethane	mg/l	5	200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,2-Trichloroethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Trichloroethene (-ethylene)	mg/l	5	2.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Trichlorofluoromethane	mg/l	5	2100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2,3-Trichloropropane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Vinyl acetate	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Vinyl chloride	mg/l	5	0.015	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Xylene	mg/l	5	530	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND

Notes:
MCL = Maximum Contaminant Level, as established in the NCDENR, Classifications of Water Quality Standards Applicable to Groundwaters of North Carolina, Section 15A NCAC 2L.202.
MDL = Laboratory Method Detection Limit
ND = Not Detected at the method detection limit
NS = Not Sampled
NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
NP = Not Present during sampling event
Shaded cells indicated exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Groundwater Sampling Event (4-25-2006)

TEST	UNITS	MDL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17	EQUIP. BLANK
pH	pH units (on-site)	-	NE	**6.33**	**7.06**	**6.61**	**6.07**	**5.45**	**6.16**	**5.63**	**5.62**	**7.7**	**5.56**	**5.83**	NP	NP	NT
Specific Conductance	mmhos/cm (on-site)	1	NE	**53**	**48**	**52**	**106**	**105**	**383**	**301**	**236**	**136**	**251**	**70**	NP	NP	NT
Temperature	°C (on-site)	-	NE	**18.1**	**19.2**	**16.1**	**13.7**	**19.5**	**20.6**	**12.4**	**13.8**	**14.6**	**14.8**	**12.9**	NP	NP	NT
Turbidity	NTU (on-site)	0.1	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Total Antimony (Sb)	mg/l	30	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Arsenic (As)	mg/l	10	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**42**	NP	NP	ND
Total Barium (Ba)	mg/l	500	2000	**650**	ND	ND	ND	**1100**	ND	ND	ND	ND	**750**	**2700**	NP	NP	ND
Total Beryllium (Be)	mg/l	2	NE	ND	ND	ND	ND	ND	ND	ND	ND	**2.1**	ND	**17**	NP	NP	ND
Total Cadmium (Cd)	mg/l	1	1.75	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Chromium (Cr)	mg/l	10	50	**65**	ND	**16**	ND	ND	ND	ND	ND	**16**	**100**	**93**	NP	NP	ND
Total Cobalt (Co)	mg/l	10	NE	**16**	ND	ND	ND	ND	ND	ND	ND	ND	**25**	**57**	NP	NP	ND
Total Copper (Cu)	mg/l	200	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Lead (Pb)	mg/l	10	15	**15**	ND	ND	ND	ND	ND	ND	ND	**53**	**19**	**300**	NP	NP	ND
Total Nickel (Ni)	mg/l	50	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**88**	NP	NP	ND
Total Selenium (Se)	mg/l	20	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Silver (Ag)	mg/l	10	17.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Thallium (Tl)	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Vanadium (V)	mg/l	40	NE	**110**	ND	ND	ND	ND	ND	ND	ND	ND	**120**	**85**	NP	NP	ND
Total Zinc (Zn)	mg/l	50	1050	**130**	ND	**88**	ND	ND	ND	ND	ND	**110**	**120**	**780**	NP	NP	ND
Acetone	mg/l	25	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Acrylonitrile	mg/l	25	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Benzene	mg/l	5	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromochloromethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromodichloromethane	mg/l	5	0.56	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromoform	mg/l	5	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Carbon Disulfide	mg/l	10	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromomethane (Methylbromide)	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Carbon tetrachloride	mg/l	5	0.269	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chlorobenzene (mono)	mg/l	5	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chloroethane	mg/l	10	2800	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chloroform	mg/l	5	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chloromethane (Methylchloride)	mg/l	5	2.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Dibromochloromethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dibromo-3-chloropropane; DBCP	mg/l	5	0.025	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dibromoethane; Ethylene dibromide	mg/l	5	0.00047	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Dibromomethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dichlorobenzene	mg/l	5	24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,4-Dichlorobenzene	mg/l	5	1.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
trans-1,4-Dichloro-2-butene	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1-Dichloroethane	mg/l	5	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dichloroethane	mg/l	5	0.38	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1-Dichloroethene (-ethylene)	mg/l	5	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
cis-1,2-Dichloroethene (-ethylene)	mg/l	5	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
trans-1,2-Dichloroethene (-ylene)	mg/l	5	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dichloropropane	mg/l	5	0.51	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
cis-1,3-Dichloropropene (-propylene)	mg/l	5	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
trans-1,3-Dichloropropene (-propylene)	mg/l	5	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Ethylbenzene	mg/l	5	550	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
2-Hexanone	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Iodomethane	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Dichloromethane (Methylene chloride)	mg/l	5	4.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
2-Butanone (Methyl ethyl ketone)	mg/l	10	4200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
4-Methyl-2-Pentanone	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Styrene	mg/l	5	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,1,2-Tetrachloroethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,2,2-Tetrachloroethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Tetrachloroethene (-ethylene)	mg/l	5	0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Toluene	mg/l	5	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,1-Trichloroethane	mg/l	5	200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,2-Trichloroethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Trichloroethene (-ethylene)	mg/l	5	2.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Trichlorofluoromethane	mg/l	5	2100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2,3-Trichloropropane	mg/l	5	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Vinyl acetate	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Vinyl chloride	mg/l	5	0.015	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Xylene	mg/l	5	530	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND

Notes:
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White Oak Landfill - Haywood Co., NC
Groundwater Sampling Event (10-20-2006)

TEST	UNITS	MDL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17	EQUIP. BLANK
pH	pH units (on-site)	-	NE	**6.47**	**6.81**	**6.51**	**6.74**	**5.56**	**6.14**	**5.87**	**5.74**	**8.2**	**5.61**	**5.97**	NP	NP	NT
Specific Conductance	mmhos/cm (on-site)	1	NE	**229**	**48**	**53**	**108**	**876**	**564**	**149**	**200**	**12.8**	**330**	**33**	NP	NP	NT
Temperature	°C (on-site)	-	NE	**12.2**	**11.9**	**12.8**	**12.5**	**12.7**	**12.9**	**14.9**	**13.7**	**13.5**	**13.3**	**14.9**	NP	NP	NT
Turbidity	NTU (on-site)	0.1	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Total Antimony (Sb)	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Arsenic (As)	mg/l	5	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**13**	NP	NP	ND
Total Barium (Ba)	mg/l	5	2000	**410**	**22**	**180**	**470**	**1100**	ND	ND	ND	**160**	ND	**650**	NP	NP	ND
Total Beryllium (Be)	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5.7**	NP	NP	ND
Total Cadmium (Cd)	mg/l	1	1.75	**3.8**	ND	ND	ND	ND	ND	ND	ND	**1.5**	ND	**5.2**	NP	NP	ND
Total Chromium (Cr)	mg/l	5	50	**50**	ND	**11**	**24**	ND	ND	ND	ND	**17**	ND	**27**	NP	NP	ND
Total Cobalt (Co)	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Copper (Cu)	mg/l	5	1000	**26**	ND	ND	**9.6**	ND	ND	ND	ND	**20**	ND	**25**	NP	NP	ND
Total Lead (Pb)	mg/l	5	15	**20**	ND	ND	ND	ND	ND	ND	ND	**32**	ND	**89**	NP	NP	ND
Total Nickel (Ni)	mg/l	5	100	**22**	ND	**8.3**	**25**	ND	ND	ND	ND	**13**	ND	**24**	NP	NP	ND
Total Selenium (Se)	mg/l	10	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Silver (Ag)	mg/l	5	17.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Thallium (Tl)	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Vanadium (V)	mg/l	5	NE	**79**	ND	ND	**28**	ND	ND	ND	ND	**23**	ND	**30**	NP	NP	ND
Total Zinc (Zn)	mg/l	10	1050	**74**	ND	**20**	**37**	ND	ND	ND	ND	**55**	ND	**200**	NP	NP	ND
Acetone	mg/l	25	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Acrylonitrile	mg/l	25	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Benzene	mg/l	5	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromochloromethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromodichloromethane	mg/l	5	0.56	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromoform	mg/l	5	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Carbon Disulfide	mg/l	10	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromomethane (Methylbromide)	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Carbon tetrachloride	mg/l	5	0.269	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chlorobenzene (mono)	mg/l	5	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chloroethane	mg/l	10	2800	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chloroform	mg/l	5	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chloromethane (Methylchloride)	mg/l	5	2.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Dibromochloromethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dibromo-3-chloropropane; DBCP	mg/l	5	0.025	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dibromoethane; Ethylene dibromide	mg/l	5	0.00047	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Dibromomethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dichlorobenzene	mg/l	5	24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,4-Dichlorobenzene	mg/l	5	1.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
trans-1,4-Dichloro-2-butene	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1-Dichloroethane	mg/l	5	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dichloroethane	mg/l	5	0.38	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1-Dichloroethene (-ethylene)	mg/l	5	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
cis-1,2-Dichloroethene (-ethylene)	mg/l	5	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
trans-1,2-Dichloroethene (-ylene)	mg/l	5	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dichloropropane	mg/l	5	0.51	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
cis-1,3-Dichloropropene (-propylene)	mg/l	5	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
trans-1,3-Dichloropropene (-propylene)	mg/l	5	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Ethylbenzene	mg/l	5	550	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
2-Hexanone	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Iodomethane	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Dichloromethane (Methylene chloride)	mg/l	5	4.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
2-Butanone (Methyl ethyl ketone)	mg/l	10	4200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
4-Methyl-2-Pentanone	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Styrene	mg/l	5	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,1,2-Tetrachloroethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,2,2-Tetrachloroethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Tetrachloroethene (-ethylene)	mg/l	5	0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Toluene	mg/l	5	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,1-Trichloroethane	mg/l	5	200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,2-Trichloroethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Trichloroethene (-ethylene)	mg/l	5	2.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Trichlorofluoromethane	mg/l	10	2100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2,3-Trichloropropane	mg/l	5	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Vinyl acetate	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Vinyl chloride	mg/l	5	0.015	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Xylene	mg/l	5	530	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND

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White Oak Landfill - Haywood Co., NC
Groundwater Sampling Event (4-25-2007)

TEST	UNITS	MDL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17	EQUIP. BLANK
pH	pH units (on-site)	-	NE	**6.04**	**7.08**	**6.27**	**6.25**	**5.36**	**5.83**	**5.7**	**5.73**	**8.02**	**5.54**	**9.08**	NP	NP	NT
Specific Conductance	mmhos/cm (on-site)	1	NE	**31**	**50**	**54**	**105**	**1540**	**757**	**391**	**312**	**134**	**336**	**46**	NP	NP	NT
Temperature	°C (on-site)	-	NE	**13.4**	**14.2**	**14**	**13**	**14**	**14.6**	**14**	**13**	**15.7**	**15.4**	**12.5**	NP	NP	NT
Turbidity	NTU (on-site)	0.1	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Total Antimony (Sb)	mg/l	6	NE	ND	ND	ND	ND	ND	**20**	ND	ND	ND	ND	ND	NP	NP	ND
Total Arsenic (As)	mg/l	5	50	ND	ND	ND	ND	ND	**280**	ND	ND	ND	ND	**12**	NP	NP	ND
Total Barium (Ba)	mg/l	100	2000	**290**	ND	**200**	**240**	**1300**	**1500**	**130**	**180**	ND	ND	**600**	NP	NP	ND
Total Beryllium (Be)	mg/l	1	NE	ND	ND	ND	ND	ND	**14**	ND	ND	ND	ND	**4.9**	NP	NP	ND
Total Cadmium (Cd)	mg/l	1	1.75	ND	ND	ND	ND	ND	**2.2**	ND	ND	ND	ND	ND	NP	NP	ND
Total Chromium (Cr)	mg/l	10	50	**20**	ND	ND	**16**	ND	**410**	ND	ND	ND	ND	**17**	NP	NP	ND
Total Cobalt (Co)	mg/l	10	NE	ND	ND	ND	ND	ND	**260**	ND	ND	ND	ND	ND	NP	NP	ND
Total Copper (Cu)	mg/l	10	1000	**15**	ND	ND	ND	ND	**330**	ND	ND	ND	ND	**26**	NP	NP	ND
Total Lead (Pb)	mg/l	10	15	ND	ND	ND	ND	ND	**96**	ND	ND	ND	ND	**69**	NP	NP	ND
Total Nickel (Ni)	mg/l	50	100	ND	ND	ND	ND	ND	**330**	ND	ND	ND	ND	ND	NP	NP	ND
Total Selenium (Se)	mg/l	10	50	**12**	ND	ND	ND	ND	**460**	ND	ND	ND	ND	**18**	NP	NP	ND
Total Silver (Ag)	mg/l	10	17.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Thallium (Tl)	mg/l	5.5	NE	ND	ND	ND	ND	ND	**35**	ND	ND	ND	ND	ND	NP	NP	ND
Total Vanadium (V)	mg/l	25	NE	**43**	ND	ND	ND	ND	**300**	ND	ND	ND	ND	**26**	NP	NP	ND
Total Zinc (Zn)	mg/l	10	1050	**55**	**21**	**30**	**30**	**22**	**830**	**22**	**15**	**10**	**12**	**200**	NP	NP	**12**
Acetone	mg/l	25	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Acrylonitrile	mg/l	25	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Benzene	mg/l	5	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromochloromethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromodichloromethane	mg/l	5	0.56	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromoform	mg/l	5	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Carbon Disulfide	mg/l	10	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromomethane (Methylbromide)	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Carbon tetrachloride	mg/l	5	0.269	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chlorobenzene (mono)	mg/l	5	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chloroethane	mg/l	10	2800	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chloroform	mg/l	5	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chloromethane (Methylchloride)	mg/l	5	2.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Dibromochloromethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dibromo-3-chloropropane; DBCP	mg/l	5	0.025	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dibromoethane; Ethylene dibromide	mg/l	5	0.00047	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Dibromomethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dichlorobenzene	mg/l	5	24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,4-Dichlorobenzene	mg/l	5	1.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
trans-1,4-Dichloro-2-butene	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1-Dichloroethane	mg/l	5	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dichloroethane	mg/l	5	0.38	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1-Dichloroethene (-ethylene)	mg/l	5	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
cis-1,2-Dichloroethene (-ethylene)	mg/l	5	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
trans-1,2-Dichloroethene (-ylene)	mg/l	5	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dichloropropane	mg/l	5	0.51	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
cis-1,3-Dichloropropene (-propylene)	mg/l	5	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
trans-1,3-Dichloropropene (-propylene)	mg/l	5	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Ethylbenzene	mg/l	5	550	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
2-Hexanone	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Iodomethane	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Dichloromethane (Methylene chloride)	mg/l	5	4.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
2-Butanone (Methyl ethyl ketone)	mg/l	10	4200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
4-Methyl-2-Pentanone	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Styrene	mg/l	5	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,1,2-Tetrachloroethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,2,2-Tetrachloroethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Tetrachloroethene (-ethylene)	mg/l	5	0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Toluene	mg/l	5	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,1-Trichloroethane	mg/l	5	200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,2-Trichloroethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Trichloroethene (-ethylene)	mg/l	5	2.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Trichlorofluoromethane	mg/l	10	2100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2,3-Trichloropropane	mg/l	5	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Vinyl acetate	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Vinyl chloride	mg/l	5	0.015	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Xylene	mg/l	5	530	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND

Notes:
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MDL = Laboratory Method Detection Limit
ND = Not Detected at the method detection limit
NS = Not Sampled
NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
NP = Not Present during sampling event
Shaded cells indicated exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Groundwater Sampling Event (10-31-2007)

TEST	UNITS	MDL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17	EQUIP. BLANK
pH	pH units (on-site)	-	NE	**6.6**	**6.8**	**6.3**	**6.22**	**5.9**	**6**	**5.5**	**5.9**	**7.99**	**5.5**	**5.9**	NP	NP	NT
Specific Conductance	mmhos/cm (on-site)	1	NE	**28**	**61**	**45**	**94**	**1475**	**911**	**346**	**300**	**132**	**543**	**36**	NP	NP	NT
Temperature	°C (on-site)	-	NE	**13.8**	**16**	**16.1**	**14.8**	**17.5**	**17.6**	**17.5**	**17.2**	**14.8**	**15.6**	**17.2**	NP	NP	NT
Turbidity	NTU (on-site)	0.1	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Total Antimony (Sb)	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Arsenic (As)	mg/l	5	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**21.4**	NP	NP	ND
Total Barium (Ba)	mg/l	5	2000	**501**	**31.5**	**223**	**198**	**1350**	**591**	**184**	**208**	**62.4**	**516**	**872**	NP	NP	ND
Total Beryllium (Be)	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**6**	NP	NP	ND
Total Cadmium (Cd)	mg/l	1	1.75	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Chromium (Cr)	mg/l	5	50	**40.9**	ND	**11.9**	**10.9**	**7.8**	ND	ND	ND	**5.1**	**75.5**	**33.7**	NP	NP	ND
Total Cobalt (Co)	mg/l	5	NE	**16.8**	ND	ND	ND	**10.6**	ND	ND	ND	ND	ND	**17.6**	NP	NP	ND
Total Copper (Cu)	mg/l	5	1000	**29.2**	ND	ND	ND	ND	ND	ND	ND	**6.3**	**40.3**	**47.4**	NP	NP	ND
Total Lead (Pb)	mg/l	5	15	**17.5**	**8.1**	ND	ND	ND	ND	ND	ND	ND	**12.3**	**123**	NP	NP	ND
Total Nickel (Ni)	mg/l	5	100	**24**	ND	**8**	**8.4**	**13.8**	ND	**5.8**	**9.8**	ND	**20.2**	**36.2**	NP	NP	ND
Total Selenium (Se)	mg/l	10	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Silver (Ag)	mg/l	5	17.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Thallium (Tl)	mg/l	5.5	NE	**11.6**	ND	ND	ND	ND	ND	ND	ND	ND	**9.5**	ND	NP	NP	ND
Total Vanadium (V)	mg/l	5	NE	**89**	ND	**8.8**	**14.7**	**20**	ND	ND	ND	**8.6**	**103**	**48.2**	NP	NP	ND
Total Zinc (Zn)	mg/l	10	1050	**86**	ND	**66.2**	**14**	**37.4**	**33.3**	**12**	ND	**11.6**	**91.1**	**336**	NP	NP	ND
Acetone	mg/l	25	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Acrylonitrile	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Benzene	mg/l	1	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromochloromethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromodichloromethane	mg/l	1	0.56	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromoform	mg/l	1	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Carbon Disulfide	mg/l	2	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromomethane (Methylbromide)	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Carbon tetrachloride	mg/l	1	0.269	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chlorobenzene (mono)	mg/l	1	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chloroethane	mg/l	1	2800	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chloroform	mg/l	1	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chloromethane (Methylchloride)	mg/l	1	2.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Dibromochloromethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dibromo-3-chloropropane; DBCP	mg/l	3	0.025	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dibromoethane; Ethylene dibromide	mg/l	1	0.00047	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Dibromomethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dichlorobenzene	mg/l	1	24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,4-Dichlorobenzene	mg/l	1	1.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
trans-1,4-Dichloro-2-butene	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1-Dichloroethane	mg/l	1	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dichloroethane	mg/l	1	0.38	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1-Dichloroethene (-ethylene)	mg/l	1	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
cis-1,2-Dichloroethene (-ethylene)	mg/l	1	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
trans-1,2-Dichloroethene (-ylene)	mg/l	1	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dichloropropane	mg/l	1	0.51	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
cis-1,3-Dichloropropene (-propylene)	mg/l	1	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
trans-1,3-Dichloropropene (-propylene)	mg/l	1	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Ethylbenzene	mg/l	1	550	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
2-Hexanone	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Iodomethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Dichloromethane (Methylene chloride)	mg/l	2	4.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
2-Butanone (Methyl ethyl ketone)	mg/l	5	4200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
4-Methyl-2-Pentanone	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Styrene	mg/l	1	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,1,2-Tetrachloroethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,2,2-Tetrachloroethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Tetrachloroethene (-ethylene)	mg/l	1	0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Toluene	mg/l	1	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,1-Trichloroethane	mg/l	1	200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,2-Trichloroethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Trichloroethene (-ethylene)	mg/l	1	2.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Trichlorofluoromethane	mg/l	1	2100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2,3-Trichloropropane	mg/l	1	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Vinyl acetate	mg/l	2	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Vinyl chloride	mg/l	1	0.015	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Xylenes	mg/l	2	530	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND

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Shaded cells indicated exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Groundwater Sampling Event (04-23-2008)

TEST	UNITS	MDL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17	EQUIP. BLANK
pH	pH units (on-site)	-	NE	**6.59**	**7.22**	**6.58**	**6.33**	**5.71**	**6.05**	**5.66**	**5.65**	**8.13**	**5.56**	**6.69**	NP	NP	NT
Specific Conductance	mmhos/cm (on-site)	1	NE	**25**	**49**	**49**	**102**	**1546**	**946**	**411**	**318**	**124**	**481**	**33**	NP	NP	NT
Temperature	°C (on-site)	-	NE	**13.9**	**14.2**	**14.2**	**13.2**	**14.6**	**14.4**	**13.4**	**14.7**	**17.4**	**14.8**	**14.1**	NP	NP	NT
Turbidity	NTU (on-site)	0.1	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Total Antimony (Sb)	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Arsenic (As)	mg/l	5	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10.2**	NP	NP	ND
Total Barium (Ba)	mg/l	5	2000	**194**	**30.8**	**253**	**168**	**1230**	**661**	**216**	**202**	**61.8**	**151**	**361**	NP	NP	ND
Total Beryllium (Be)	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**3**	NP	NP	ND
Total Cadmium (Cd)	mg/l	1	1.75	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1.6**	NP	NP	ND
Total Chromium (Cr)	mg/l	5	50	**10.7**	ND	**16.8**	**7.8**	ND	ND	ND	ND	**7.6**	**7.3**	**14.9**	NP	NP	ND
Total Cobalt (Co)	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**22.3**	NP	NP	ND
Total Copper (Cu)	mg/l	5	1000	**7.2**	ND	ND	ND	ND	ND	ND	ND	**7.2**	ND	**17**	NP	NP	ND
Total Lead (Pb)	mg/l	5	15	ND	ND	**8.4**	ND	ND	ND	ND	ND	**5.8**	ND	**50.2**	NP	NP	ND
Total Nickel (Ni)	mg/l	5	100	**7.3**	ND	**12.9**	**6.3**	**10.8**	**5.7**	ND	**11.3**	**5.3**	ND	**19**	NP	NP	ND
Total Selenium (Se)	mg/l	10	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Silver (Ag)	mg/l	5	17.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Thallium (Tl)	mg/l	5.5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Vanadium (V)	mg/l	5	NE	**26.1**	ND	**11.4**	**9.7**	**10.1**	ND	ND	**5.1**	**9.7**	**10**	**23.1**	NP	NP	ND
Total Zinc (Zn)	mg/l	10	1050	**27.3**	ND	**50.3**	**12.2**	**24.4**	**36.9**	ND	**10.3**	**17.5**	**38.8**	**138**	NP	NP	ND
Acetone	mg/l	25	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Acrylonitrile	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Benzene	mg/l	1	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromochloromethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromodichloromethane	mg/l	1	0.56	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromoform	mg/l	1	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Carbon Disulfide	mg/l	2	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromomethane (Methylbromide)	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Carbon tetrachloride	mg/l	1	0.269	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chlorobenzene (mono)	mg/l	1	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chloroethane	mg/l	1	2800	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chloroform	mg/l	1	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chloromethane (Methylchloride)	mg/l	1	2.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Dibromochloromethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dibromo-3-chloropropane; DBCP	mg/l	3	0.025	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dibromoethane; Ethylene dibromide	mg/l	1	0.00047	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Dibromomethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dichlorobenzene	mg/l	1	24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,4-Dichlorobenzene	mg/l	1	1.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
trans-1,4-Dichloro-2-butene	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1-Dichloroethane	mg/l	1	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dichloroethane	mg/l	1	0.38	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1-Dichloroethene (-ethylene)	mg/l	1	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
cis-1,2-Dichloroethene (-ethylene)	mg/l	1	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
trans-1,2-Dichloroethene (-ylene)	mg/l	1	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dichloropropane	mg/l	1	0.51	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
cis-1,3-Dichloropropene (-propylene)	mg/l	1	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
trans-1,3-Dichloropropene (-propylene)	mg/l	1	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Ethylbenzene	mg/l	1	550	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
2-Hexanone	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Iodomethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Dichloromethane (Methylene chloride)	mg/l	2	4.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
2-Butanone (Methyl ethyl ketone)	mg/l	5	4200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
4-Methyl-2-Pentanone	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Styrene	mg/l	1	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,1,2-Tetrachloroethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,2,2-Tetrachloroethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Tetrachloroethene (-ethylene)	mg/l	1	0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Toluene	mg/l	1	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,1-Trichloroethane	mg/l	1	200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,2-Trichloroethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Trichloroethene (-ethylene)	mg/l	1	2.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Trichlorofluoromethane	mg/l	1	2100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2,3-Trichloropropane	mg/l	1	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Vinyl acetate	mg/l	2	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Vinyl chloride	mg/l	1	0.015	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Xylenes	mg/l	2	530	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND

Notes:
MCL = Maximum Contaminant Level, as established in the NCDENR, Classifications of Water Quality Standards Applicable to Groundwaters of North Carolina, Section 15A NCAC 2L.202.
MDL = Laboratory Method Detection Limit
ND = Not Detected at the method detection limit
NS = Not Sampled
NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
NP = Not Present during sampling event
Shaded cells indicated exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Groundwater Sampling Event (10-20-2008)

TEST	UNITS	MDL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17	EQUIP. BLANK
pH	pH units (on-site)	-	NE	**5.7**	**6.7**	**6.2**	**6.1**	**5.9**	**6.0**	**5.9**	**5.8**	**7.9**	**5.6**	**5.5**	NP	NP	NT
Specific Conductance	mmhos/cm (on-site)	1	NE	**28.0**	**54.0**	**44.0**	**104**	**1420**	**1111**	**320**	**350.0**	**129.0**	**621.0**	**41.0**	NP	NP	NT
Temperature	°C (on-site)	-	NE	**13.8**	**14.2**	**12.0**	**13.2**	**14.3**	**15.4**	**14.9**	**14.6**	**15.2**	**14.5**	**16.5**	NP	NP	NT
Turbidity	NTU (on-site)	0.1	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Total Antimony (Sb)	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Arsenic (As)	mg/l	5	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**6.6**	NP	NP	ND
Total Barium (Ba)	mg/l	5	2000	**474**	**66.0**	**313**	**224**	**1210**	**894**	**164**	**216**	**41.1**	**182**	**245**	NP	NP	ND
Total Beryllium (Be)	mg/l	1	NE	ND	**1.2**	ND	ND	ND	ND	ND	ND	ND	ND	**1.9**	NP	NP	ND
Total Cadmium (Cd)	mg/l	1	1.75	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Chromium (Cr)	mg/l	5	50	**38.6**	ND	**29.4**	**12.7**	ND	ND	ND	ND	ND	ND	**6.8**	NP	NP	ND
Total Cobalt (Co)	mg/l	5	NE	**27.0**	**10.4**	**19.5**	**9.4**	**7.7**	ND	**12.6**	**5.3**	**7.1**	ND	**18.4**	NP	NP	ND
Total Copper (Cu)	mg/l	5	1000	**26.5**	ND	**8.3**	ND	ND	ND	ND	ND	ND	ND	**9.7**	NP	NP	ND
Total Lead (Pb)	mg/l	5	15	ND	**13.5**	**7.6**	ND	ND	ND	ND	ND	ND	ND	**25.9**	NP	NP	ND
Total Nickel (Ni)	mg/l	5	100	**23.0**	ND	**21.0**	**11.1**	**10.7**	**7.5**	ND	**14.0**	ND	ND	**8.5**	NP	NP	ND
Total Selenium (Se)	mg/l	10	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Silver (Ag)	mg/l	5	17.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Thallium (Tl)	mg/l	5.4	NE	**7.2**	ND	ND	ND	ND	ND	ND	**6.1**	ND	ND	ND	NP	NP	ND
Total Vanadium (V)	mg/l	5	NE	**79.0**	ND	**15.1**	**15.8**	ND	ND	ND	ND	**5.4**	ND	**14.8**	NP	NP	ND
Total Zinc (Zn)	mg/l	10	1050	**66.5**	**19.9**	**59.2**	**15.3**	**10.6**	**29.1**	ND	**12.4**	ND	**17.4**	**71.5**	NP	NP	ND
Acetone	mg/l	25	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**140**	NP	NP	ND
Acrylonitrile	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Benzene	mg/l	1	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromochloromethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromodichloromethane	mg/l	1	0.56	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromoform	mg/l	1	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Carbon Disulfide	mg/l	2	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromomethane (Methylbromide)	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Carbon tetrachloride	mg/l	1	0.269	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chlorobenzene (mono)	mg/l	1	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chloroethane	mg/l	1	2800	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chloroform	mg/l	1	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chloromethane (Methylchloride)	mg/l	1	2.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Dibromochloromethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dibromo-3-chloropropane; DBCP	mg/l	3	0.025	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dibromoethane; Ethylene dibromide	mg/l	1	0.00047	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Dibromomethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dichlorobenzene	mg/l	1	24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,4-Dichlorobenzene	mg/l	1	1.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
trans-1,4-Dichloro-2-butene	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1-Dichloroethane	mg/l	1	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dichloroethane	mg/l	1	0.38	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1-Dichloroethene (-ethylene)	mg/l	1	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
cis-1,2-Dichloroethene (-ethylene)	mg/l	1	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
trans-1,2-Dichloroethene (-ylene)	mg/l	1	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dichloropropane	mg/l	1	0.51	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
cis-1,3-Dichloropropene (-propylene)	mg/l	1	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
trans-1,3-Dichloropropene (-propylene)	mg/l	1	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Ethylbenzene	mg/l	1	550	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
2-Hexanone	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Iodomethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Dichloromethane (Methylene chloride)	mg/l	2	4.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
2-Butanone (Methyl ethyl ketone)	mg/l	5	4200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**54.4**	NP	NP	ND
4-Methyl-2-Pentanone	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Styrene	mg/l	1	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,1,2-Tetrachloroethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,2,2-Tetrachloroethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Tetrachloroethene (-ethylene)	mg/l	1	0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Toluene	mg/l	1	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,1-Trichloroethane	mg/l	1	200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,2-Trichloroethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Trichloroethene (-ethylene)	mg/l	1	2.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Trichlorofluoromethane	mg/l	1	2100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2,3-Trichloropropane	mg/l	1	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Vinyl acetate	mg/l	2	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Vinyl chloride	mg/l	1	0.015	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Xylenes	mg/l	2	530	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND

Notes:
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MDL = Laboratory Method Detection Limit
ND = Not Detected at the method detection limit
NS = Not Sampled
NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
NP = Not Present during sampling event
Shaded cells indicated exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Groundwater Sampling Event (4-22-2009)

TEST	UNITS	MDL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17	EQUIP. BLANK
pH	pH units (on-site)	-	NE	**5.64**	**6.89**	**6.32**	**5.83**	**5.74**	**5.92**	**5.75**	**5.72**	**7.56**	**5.47**	NS	NP	NP	NT
Specific Conductance	mmhos/cm (on-site)	1	NE	**28.0**	**53.0**	**12.0**	**131**	**1427**	**1109**	**398**	**358**	**131**	**536.0**	NS	NP	NP	NT
Temperature	°C (on-site)	-	NE	**13.3**	**13.1**	**47**	**13.4**	**12.8**	**13.1**	**11.7**	**12.1**	**14.4**	**15.1**	NS	NP	NP	NT
Turbidity	NTU (on-site)	0.1	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Total Antimony (Sb)	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
Total Arsenic (As)	mg/l	5	50	ND	ND	**5.4**	ND	ND	**5.6**	ND	ND	ND	ND	NS	NP	NP	ND
Total Barium (Ba)	mg/l	5	2000	**126**	**47.2**	**591**	**309**	**1300**	**817**	**230**	**216**	**77.0**	**163**	NS	NP	NP	ND
Total Beryllium (Be)	mg/l	1	NE	ND	ND	**1.5**	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
Total Cadmium (Cd)	mg/l	1	1.75	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
Total Chromium (Cr)	mg/l	5	50	**12.3**	ND	**28.9**	**19.7**	**5.1**	ND	ND	ND	**7.3**	ND	NS	NP	NP	ND
Total Cobalt (Co)	mg/l	5	NE	**5.0**	**6.3**	**17.1**	**8.5**	**5.7**	ND	**7.0**	ND	**6.4**	ND	NS	NP	NP	ND
Total Copper (Cu)	mg/l	5	1000	**5.1**	ND	**22.6**	**6.0**	ND	ND	ND	ND	**8.8**	ND	NS	NP	NP	ND
Total Lead (Pb)	mg/l	5	15	ND	**8.7**	**24.4**	ND	ND	ND	ND	ND	**9.8**	ND	NS	NP	NP	ND
Total Nickel (Ni)	mg/l	5	100	**5.6**	**7.2**	**19.7**	**16.7**	**10.9**	**6.0**	**5.1**	**14.0**	**6.0**	ND	NS	NP	NP	ND
Total Selenium (Se)	mg/l	10	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
Total Silver (Ag)	mg/l	5	17.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
Total Thallium (Tl)	mg/l	5.4	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
Total Vanadium (V)	mg/l	5	NE	**16.0**	ND	**32.7**	**19.8**	**7.7**	ND	ND	ND	**13.3**	ND	NS	NP	NP	ND
Total Zinc (Zn)	mg/l	10	1050	**23.1**	**43.5**	**99.9**	**25.3**	**17.9**	**17.6**	**10.5**	ND	**35.2**	ND	NS	NP	NP	ND
Acetone	mg/l	25	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
Acrylonitrile	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
Benzene	mg/l	1	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
Bromochloromethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
Bromodichloromethane	mg/l	1	0.56	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
Bromoform	mg/l	1	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
Carbon Disulfide	mg/l	2	700	ND	ND	ND	ND	ND	ND	ND	ND	**4.5**	ND	NS	NP	NP	ND
Bromomethane (Methylbromide)	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
Carbon tetrachloride	mg/l	1	0.269	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
Chlorobenzene (mono)	mg/l	1	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
Chloroethane	mg/l	1	2800	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
Chloroform	mg/l	1	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
Chloromethane (Methylchloride)	mg/l	1	2.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
Dibromochloromethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
1,2-Dibromo-3-chloropropane; DBCP	mg/l	3	0.025	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
1,2-Dibromoethane; Ethylene dibromide	mg/l	1	0.00047	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
Dibromomethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
1,2-Dichlorobenzene	mg/l	1	24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
1,4-Dichlorobenzene	mg/l	1	1.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
trans-1,4-Dichloro-2-butene	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
1,1-Dichloroethane	mg/l	1	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
1,2-Dichloroethane	mg/l	1	0.38	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
1,1-Dichloroethene (-ethylene)	mg/l	1	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
cis-1,2-Dichloroethene (-ethylene)	mg/l	1	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
trans-1,2-Dichloroethene (-ylene)	mg/l	1	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
1,2-Dichloropropane	mg/l	1	0.51	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
cis-1,3-Dichloropropene (-propylene)	mg/l	1	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
trans-1,3-Dichloropropene (-propylene)	mg/l	1	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
Ethylbenzene	mg/l	1	550	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
2-Hexanone	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
Iodomethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
Dichloromethane (Methylene chloride)	mg/l	2	4.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
2-Butanone (Methyl ethyl ketone)	mg/l	5	4200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
4-Methyl-2-Pentanone	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
Styrene	mg/l	1	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
1,1,1,2-Tetrachloroethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
1,1,2,2-Tetrachloroethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
Tetrachloroethene (-ethylene)	mg/l	1	0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
Toluene	mg/l	1	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
1,1,1-Trichloroethane	mg/l	1	200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
1,1,2-Trichloroethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
Trichloroethene (-ethylene)	mg/l	1	2.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
Trichlorofluoromethane	mg/l	1	2100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
1,2,3-Trichloropropane	mg/l	1	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
Vinyl acetate	mg/l	2	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
Vinyl chloride	mg/l	1	0.015	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
Xylenes	mg/l	2	530	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND

Notes:
MCL = Maximum Contaminant Level, as established in the NCDENR, Classifications of Water Quality Standards Applicable to Groundwaters of North Carolina, Section 15A NCAC 2L.202.
MDL = Laboratory Method Detection Limit
ND = Not Detected at the method detection limit
NS = Not Sampled
NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
NP = Not Present during sampling event
Shaded cells indicated exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Groundwater Sampling Event (10-26-2009)

TEST	UNITS	MDL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17	EQUIP. BLANK
pH	pH units (on-site)	-	NE	**5.88**	**6.35**	**6.0**	**5.76**	**5.78**	**5.95**	NS	NS	NS	**5.32**	**5.30**	NP	NP	NT
Specific Conductance	mmhos/cm (on-site)	1	NE	**29**	**50**	**37.0**	**127**	**1532**	**1120**	NS	NS	NS	**637**	**39**	NP	NP	NT
Temperature	°C (on-site)	-	NE	**13.4**	**13.2**	**14.4**	**14.6**	**14.7**	**15.9**	NS	NS	NS	**14.5**	**15.3**	NP	NP	NT
Turbidity	NTU (on-site)	0.1	NE	NT	NT	NT	NT	NT	NT	NS	NS	NS	NT	NS	NP	NP	NT
Total Antimony (Sb)	mg/l	5	NE	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
Total Arsenic (As)	mg/l	5	50	ND	ND	ND	ND	**6.0**	ND	NS	NS	NS	ND	ND	NP	NP	ND
Total Barium (Ba)	mg/l	5	2000	**131**	**16.8**	**144**	**188**	**1720**	**987**	NS	NS	NS	**209**	**178**	NP	NP	ND
Total Beryllium (Be)	mg/l	1	NE	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	**1.7**	NP	NP	ND
Total Cadmium (Cd)	mg/l	1	1.75	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
Total Chromium (Cr)	mg/l	5	50	**10.0**	ND	**8.1**	ND	**18.7**	ND	NS	NS	NS	**10.9**	**8.1**	NP	NP	ND
Total Cobalt (Co)	mg/l	5	NE	ND	ND	ND	ND	**6.0**	ND	NS	NS	NS	ND	**6.0**	NP	NP	ND
Total Copper (Cu)	mg/l	5	1000	**5.8**	ND	ND	ND	**6.4**	ND	NS	NS	NS	ND	**7.1**	NP	NP	ND
Total Lead (Pb)	mg/l	5	15	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	**24.7**	NP	NP	ND
Total Nickel (Ni)	mg/l	5	100	**6.7**	ND	**5.2**	**6.0**	**18.0**	**7.5**	NS	NS	NS	**6.0**	**8.4**	NP	NP	ND
Total Selenium (Se)	mg/l	10	50	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
Total Silver (Ag)	mg/l	5	17.5	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
Total Thallium (Tl)	mg/l	5.4	NE	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
Total Vanadium (V)	mg/l	5	NE	**17.9**	ND	ND	**5.3**	**33.6**	ND	NS	NS	NS	**12.2**	**11.9**	NP	NP	ND
Total Zinc (Zn)	mg/l	10	1050	**19.6**	ND	**14.8**	ND	**37.8**	ND	NS	NS	NS	ND	**63.8**	NP	NP	ND
Acetone	mg/l	25	700	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
Acrylonitrile	mg/l	10	NE	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
Benzene	mg/l	1	1	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
Bromochloromethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
Bromodichloromethane	mg/l	1	0.56	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
Bromoform	mg/l	1	0.19	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
Carbon Disulfide	mg/l	2	700	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
Bromomethane (Methylbromide)	mg/l	5	NE	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
Carbon tetrachloride	mg/l	1	0.269	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
Chlorobenzene (mono)	mg/l	1	50	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
Chloroethane	mg/l	1	2800	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
Chloroform	mg/l	1	70	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
Chloromethane (Methylchloride)	mg/l	1	2.6	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
Dibromochloromethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
1,2-Dibromo-3-chloropropane; DBCP	mg/l	3	0.025	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
1,2-Dibromoethane; Ethylene dibromide	mg/l	1	0.00047	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
Dibromomethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
1,2-Dichlorobenzene	mg/l	1	24	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
1,4-Dichlorobenzene	mg/l	1	1.4	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
trans-1,4-Dichloro-2-butene	mg/l	1	NE	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
1,1-Dichloroethane	mg/l	1	70	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
1,2-Dichloroethane	mg/l	1	0.38	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
1,1-Dichloroethene (-ethylene)	mg/l	1	7	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
cis-1,2-Dichloroethene (-ethylene)	mg/l	1	70	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
trans-1,2-Dichloroethene (-ylene)	mg/l	1	100	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
1,2-Dichloropropane	mg/l	1	0.51	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
cis-1,3-Dichloropropene (-propylene)	mg/l	1	0.19	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
trans-1,3-Dichloropropene (-propylene)	mg/l	1	0.19	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
Ethylbenzene	mg/l	1	550	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
2-Hexanone	mg/l	5	NE	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
Iodomethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
Dichloromethane (Methylene chloride)	mg/l	2	4.6	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
2-Butanone (Methyl ethyl ketone)	mg/l	5	4200	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
4-Methyl-2-Pentanone	mg/l	5	NE	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
Styrene	mg/l	1	100	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
1,1,1,2-Tetrachloroethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
1,1,2,2-Tetrachloroethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
Tetrachloroethene (-ethylene)	mg/l	1	0.7	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
Toluene	mg/l	1	1000	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
1,1,1-Trichloroethane	mg/l	1	200	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
1,1,2-Trichloroethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
Trichloroethene (-ethylene)	mg/l	1	2.8	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
Trichlorofluoromethane	mg/l	1	2100	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
1,2,3-Trichloropropane	mg/l	1	0.005	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
Vinyl acetate	mg/l	2	NE	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
Vinyl chloride	mg/l	1	0.015	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
Xylenes	mg/l	2	530	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND

Notes:
MCL = Maximum Contaminant Level, as established in the NCDENR, Classifications of Water Quality Standards Applicable to Groundwaters of North Carolina, Section 15A NCAC 2L.202.
MDL = Laboratory Method Detection Limit
ND = Not Detected at the method detection limit
NS = Not Sampled
NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
NP = Not Present during sampling event
Shaded cells indicated exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Groundwater Sampling Event (4-22-2010)

TEST	UNITS	MDL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17	EQUIP. BLANK
pH	pH units (on-site)	-	NE	**6.05**	**6.54**	**6.33**	**6.06**	**5.90**	**5.94**	NS	NS	**7.04**	**5.50**	**5.69**	NP	NP	NT
Specific Conductance	mmhos/cm (on-site)	1	NE	**65**	**96**	**8.2**	**161**	**1987**	**1812**	NS	NS	**1727**	**659**	**83**	NP	NP	NT
Temperature	°C (on-site)	-	NE	**13.5**	**13.8**	**13.9**	**13.5**	**13.3**	**13.4**	NS	NS	**14.9**	**14.6**	**12.7**	NP	NP	NT
Turbidity	NTU (on-site)	NT	NE	NT	NT	NT	NT	NT	NT	NS	NS	NT	NT	NT	NP	NP	NT
Total Antimony (Sb)	mg/l	5	NE	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
Total Arsenic (As)	mg/l	5	50	ND	ND	ND	ND	**7.4**	**9.8**	NS	NS	ND	ND	ND	NP	NP	ND
Total Barium (Ba)	mg/l	5	2000	**208**	**43.5**	**153**	**157**	**1920**	**1380**	NS	NS	**20.9**	**150**	**74.8**	NP	NP	ND
Total Beryllium (Be)	mg/l	1	NE	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
Total Cadmium (Cd)	mg/l	1	1.75	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
Total Chromium (Cr)	mg/l	5	50	**14.3**	**10.9**	**13.1**	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
Total Cobalt (Co)	mg/l	5	NE	**5.6**	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
Total Copper (Cu)	mg/l	5	1000	**9.9**	ND	ND	ND	ND	**5.9**	NS	NS	ND	ND	ND	NP	NP	ND
Total Lead (Pb)	mg/l	5	15	ND	**10.5**	ND	ND	ND	ND	NS	NS	ND	ND	**9.2**	NP	NP	ND
Total Nickel (Ni)	mg/l	5	100	**8.6**	**9.6**	**7.6**	ND	**6.2**	ND	NS	NS	ND	ND	ND	NP	NP	ND
Total Selenium (Se)	mg/l	10	50	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
Total Silver (Ag)	mg/l	5	17.5	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
Total Thallium (Tl)	mg/l	5.4	NE	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
Total Vanadium (V)	mg/l	5	NE	**27.9**	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
Total Zinc (Zn)	mg/l	10	1050	**22.2**	**14.2**	ND	ND	ND	ND	NS	NS	ND	ND	**24.6**	NP	NP	ND
Acetone	mg/l	25	700	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
Acrylonitrile	mg/l	10	NE	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
Benzene	mg/l	1	1	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
Bromochloromethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
Bromodichloromethane	mg/l	1	0.56	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
Bromoform	mg/l	1	0.19	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
Carbon Disulfide	mg/l	2	700	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
Bromomethane (Methylbromide)	mg/l	5	NE	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
Carbon tetrachloride	mg/l	1	0.269	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
Chlorobenzene (mono)	mg/l	1	50	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
Chloroethane	mg/l	1	2800	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
Chloroform	mg/l	1	70	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
Chloromethane (Methylchloride)	mg/l	1	2.6	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
Dibromochloromethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
1,2-Dibromo-3-chloropropane; DBCP	mg/l	3	0.025	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
1,2-Dibromoethane; Ethylene dibromide	mg/l	1	0.00047	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
Dibromomethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
1,2-Dichlorobenzene	mg/l	1	24	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
1,4-Dichlorobenzene	mg/l	1	1.4	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
trans-1,4-Dichloro-2-butene	mg/l	1	NE	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
1,1-Dichloroethane	mg/l	1	70	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
1,2-Dichloroethane	mg/l	1	0.38	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
1,1-Dichloroethene (-ethylene)	mg/l	1	7	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
cis-1,2-Dichloroethene (-ethylene)	mg/l	1	70	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
trans-1,2-Dichloroethene (-ylene)	mg/l	1	100	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
1,2-Dichloropropane	mg/l	1	0.51	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
cis-1,3-Dichloropropene (-propylene)	mg/l	1	0.19	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
trans-1,3-Dichloropropene (-propylene)	mg/l	1	0.19	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
Ethylbenzene	mg/l	1	550	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
2-Hexanone	mg/l	5	NE	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
Iodomethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
Dichloromethane (Methylene chloride)	mg/l	2	4.6	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
2-Butanone (Methyl ethyl ketone)	mg/l	5	4200	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
4-Methyl-2-Pentanone	mg/l	5	NE	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
Styrene	mg/l	1	100	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
1,1,1,2-Tetrachloroethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
1,1,2,2-Tetrachloroethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
Tetrachloroethene (-ethylene)	mg/l	1	0.7	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
Toluene	mg/l	1	1000	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
1,1,1-Trichloroethane	mg/l	1	200	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
1,1,2-Trichloroethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
Trichloroethene (-ethylene)	mg/l	1	2.8	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
Trichlorofluoromethane	mg/l	1	2100	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
1,2,3-Trichloropropane	mg/l	1	0.005	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
Vinyl acetate	mg/l	2	NE	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
Vinyl chloride	mg/l	1	0.015	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
Xylenes	mg/l	2	530	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND

Notes:
MCL = Maximum Contaminant Level, as established in the NCDENR, Classifications of Water Quality Standards Applicable to Groundwaters of North Carolina, Section 15A NCAC 2L.202.
MDL = Laboratory Method Detection Limit
ND = Not Detected at the method detection limit
NS = Not Sampled
NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
NP = Not Present during sampling event
Shaded cells indicate exceedance of MCLs.

White Oak Landfill - Haywood Co., NC
Groundwater Sampling Event (10-27-2010)

TEST	UNITS	MDL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3R	MW-3DR	MW-4A	MW-8	MW-15	MW-16	MW-17	EQUIP. BLANK
pH	pH units (on-site)	-	NE	**5.33**	**6.38**	**6.06**	**5.69**	**5.72**	**5.96**	**5.43**	**5.65**	**7.36**	**5.29**	**5.44**	**5.65**	**5.82**	NT
Specific Conductance	mmhos/cm (on-site)	1	NE	**35**	**52**	**54**	**113**	**189**	**177**	**418**	**317**	**140**	**772**	**46**	**221**	**90**	NT
Temperature	°C (on-site)	-	NE	**13.7**	**14.1**	**14.1**	**13.9**	**13.9**	**14.7**	**15.2**	**15.0**	**15.7**	**14.7**	**16.5**	**15.9**	**15.0**	NT
Turbidity	NTU (on-site)	NT	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Total Antimony (Sb)	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Arsenic (As)	mg/l	5	50	ND	ND	ND	ND	**5.4**	**5.9**	ND	ND	ND	ND	ND	ND	ND	ND
Total Barium (Ba)	mg/l	5	2000	**147**	**15.8**	**162**	**178**	**1760**	**1550**	**531**	**234**	**20.0**	**190**	**111**	**191**	**84.4**	ND
Total Beryllium (Be)	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Cadmium (Cd)	mg/l	1	1.75	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Chromium (Cr)	mg/l	5	50	**10.1**	ND	**6.6**	**7.1**	ND	ND	**12.0**	**9.2**	ND	ND	**5.2**	ND	ND	ND
Total Cobalt (Co)	mg/l	5	NE	ND	ND	ND	ND	ND	ND	**17.3**	**5.6**	ND	ND	**7.8**	**29.6**	ND	ND
Total Copper (Cu)	mg/l	5	1000	**6.7**	ND	ND	ND	ND	ND	ND	**12.4**	ND	ND	**53.9**	ND	ND	ND
Total Lead (Pb)	mg/l	5	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**16.0**	ND	ND	ND
Total Nickel (Ni)	mg/l	5	100	**7.0**	ND	ND	ND	**7.4**	ND	**21.5**	**19.0**	ND	ND	**7.5**	**10.8**	ND	ND
Total Selenium (Se)	mg/l	10	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Silver (Ag)	mg/l	5	17.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Thallium (Tl)	mg/l	5.4	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Vanadium (V)	mg/l	5	NE	**17.4**	ND	ND	**6.9**	ND	ND	**14.2**	**7.1**	ND	ND	**5.9**	ND	ND	ND
Total Zinc (Zn)	mg/l	10	1050	**19.1**	ND	**12.3**	**15.0**	ND	ND	**32.4**	**16.3**	ND	ND	**60.7**	ND	ND	ND
Acetone	mg/l	25	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	mg/l	1	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	mg/l	1	0.56	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	mg/l	1	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	mg/l	2	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane (Methylbromide)	mg/l	2	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	mg/l	1	0.269	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene (mono)	mg/l	1	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	mg/l	1	2800	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	mg/l	1	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methylchloride)	mg/l	1	2.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane; DBCP	mg/l	5	0.025	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane; Ethylene dibromide	mg/l	1	0.00047	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	mg/l	1	24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	mg/l	1	1.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-Dichloro-2-butene	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	mg/l	1	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	mg/l	1	0.38	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene (-ethylene)	mg/l	1	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene (-ethylene)	mg/l	1	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene (-ylene)	mg/l	1	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	mg/l	1	0.51	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene (-propylene)	mg/l	1	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene (-propylene)	mg/l	1	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	mg/l	1	550	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodomethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichloromethane (Methylene chloride)	mg/l	2	4.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone (Methyl ethyl ketone)	mg/l	5	4200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	mg/l	1	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene (-ethylene)	mg/l	1	0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	mg/l	1	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	mg/l	1	200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene (-ethylene)	mg/l	1	2.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	mg/l	1	2100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	mg/l	1	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl acetate	mg/l	2	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	mg/l	1	0.015	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes	mg/l	2	530	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:
MCL = Maximum Contaminant Level, as established in the NCDENR, Classifications of Water Quality Standards Applicable to Groundwaters of North Carolina, Section 15A NCAC 2L.202.
MDL = Laboratory Method Detection Limit
ND = Not Detected at the method detection limit
NS = Not Sampled
NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
NP = Not Present during sampling event
Shaded cells indicate exceedance of MCLs.

APPENDIX B

SUMMARY TABLE OF SURFACE WATER ANALYTICAL RESULTS

White Oak Landfill - Haywood Co., NC
Surface Water Sampling Event (4-24-2000)

TEST	UNITS	MDL	MCL	SW-1	SW-2	SW-3	SW-4	SW-5	SW-6	SW-7	Leachate	Settling
pH	pH units (on-site)	-	<6.0; >9.0	**6.4**	**6.3**	**6.7**	**6.4**	NS	NS	NS	**7.8**	NS
Specific Conductance	µmhos/cm (on-site)	1	NE	**65**	**65**	**59**	**65**	NS	NS	NS	**2600**	NS
Temperature	°C (on-site)	-	29	**11**	**11**	**14**	**11**	NS	NS	NS	**11**	NS
Turbidity	NTU (on-site)	0.1	50	NT	NT	NT	NT	NS	NS	NS	NT	NS
Nitrate as N	mg/l	0.1	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Nitrate/Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NS	NS	NS	**300**	NS
Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Nitrogen	mg/l	0.2	NE	NT	NT	NT	NT	NS	NS	NS	**95**	NS
Total Nitrogen, Kjeldahl	mg/l	100	NE	NT	NT	NT	NT	NS	NS	NS	**95**	NS
Sulfate	mg/l	500	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Biochemical Oxygen Demand	mg/l	2	NE	NT	NT	NT	NT	NS	NS	NS	**190**	NS
Chemical Oxygen Demand	mg/l	25	NE	NT	NT	NT	NT	NS	NS	NS	**670**	NS
Total Dissolved Solids	mg/l	20	NE	NT	NT	NT	NT	NS	NS	NS	**2700**	NS
Cyanide	mg/l	2	5	NT	NT	NT	NT	NS	NS	NS	**13**	NS
Total Antimony (Sb)	mg/l	30	NE	ND	ND	ND	**25**	NS	NS	NS	NT	NS
Total Arsenic (As)	mg/l	10	10	ND	ND	ND	ND	NS	NS	NS	NT	NS
Total Barium (Ba)	mg/l	500	NE	**91**	**70**	**29**	**62**	NS	NS	NS	NT	NS
Total Beryllium (Be)	mg/l	2	6.5	ND	**2**	ND	ND	NS	NS	NS	NT	NS
Total Cadmium (Cd)	mg/l	1	0.4	ND	ND	ND	ND	NS	NS	NS	NT	NS
Total Chromium (Cr)	mg/l	10	50	ND	ND	ND	ND	NS	NS	NS	**13**	NS
Total Cobalt (Co)	mg/l	10	NE	ND	ND	ND	**16**	NS	NS	NS	NT	NS
Total Copper (Cu)	mg/l	200	7	ND	ND	ND	ND	NS	NS	NS	NT	NS
Total Lead (Pb)	mg/l	10	25	ND	ND	ND	ND	NS	NS	NS	ND	NS
Total Nickel (Ni)	mg/l	50	88	ND	ND	ND	ND	NS	NS	NS	NT	NS
Total Selenium (Se)	mg/l	20	5	ND	ND	ND	ND	NS	NS	NS	ND	NS
Total Silver (Ag)	mg/l	10	0.06	ND	ND	ND	**3.8**	NS	NS	NS	NT	NS
Total Thallium (Tl)	mg/l	10	NE	ND	ND	ND	ND	NS	NS	NS	**2**	NS
Total Vanadium (V)	mg/l	40	NE	ND	ND	ND	ND	NS	NS	NS	NT	NS
Total Zinc (Zn)	mg/l	50	50	**13**	**26**	**14**	ND	NS	NS	NS	NT	NS
Mercury	mg/l	0.2	0.012	NT	NT	NT	NT	NS	NS	NS	**0.3**	NS
Acetone	mg/l	100	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Acrylonitrile	mg/l	200	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Benzene	mg/l	5	51	NT	NT	NT	NT	NS	NS	NS	NT	NS
Bromochloromethane	mg/l	5	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Bromodichloromethane	mg/l	5	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Bromoform	mg/l	5	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Carbon Disulfide	mg/l	100	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Bromomethane (Methylbromide)	mg/l	10	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Carbon tetrachloride	mg/l	10	1.6	NT	NT	NT	NT	NS	NS	NS	NT	NS
Chlorobenzene (mono)	mg/l	5	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Chloroethane	mg/l	10	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Chloroform	mg/l	5	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Chloromethane (Methylchloride)	mg/l	10	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Dibromochloromethane	mg/l	5	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
1,2-Dibromo-3-chloropropane; DBCP	mg/l	25	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
1,2-Dibromoethane; Ethylene dibromide	mg/l	5	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Dibromomethane	mg/l	10	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
1,2-Dichlorobenzene	mg/l	5	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
1,4-Dichlorobenzene	mg/l	5	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
trans-1,4-Dichloro-2butene	mg/l	100	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
1,1-Dichloroethane	mg/l	5	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
1,2-Dichloroethane	mg/l	5	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
1,1-Dichloroethene (-ethylene)	mg/l	5	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
cis-1,2-Dichloroethene (-ethylene)	mg/l	5	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
trans-1,2-Dichloroethene (-ylene)	mg/l	5	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
1,2-Dichloropropane	mg/l	5	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
cis-1,3-Dichloropropene (-propylene)	mg/l	10	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
trans-1,3-Dichloropropene (-propylene)	mg/l	10	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Ethylbenzene	mg/l	5	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
2-Hexanone	mg/l	50	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Iodomethane	mg/l	10	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Dichloromethane (Methylene chloride)	mg/l	10	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
2-Butanone (Methyl ethyl ketone)	mg/l	100	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
4-Methyl-2-Pentanone	mg/l	100	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Styrene	mg/l	10	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
1,1,1,2-Tetrachloroethane	mg/l	5	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
1,1,2,2-Tetrachloroethane	mg/l	5	4	NT	NT	NT	NT	NS	NS	NS	NT	NS
Tetrachloroethene (-ethylene)	mg/l	5	3.3	NT	NT	NT	NT	NS	NS	NS	NT	NS
Toluene	mg/l	5	0.36	NT	NT	NT	NT	NS	NS	NS	NT	NS
1,1,1-Trichloroethane	mg/l	5	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
1,1,2-Trichloroethane	mg/l	5	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Trichloroethene (-ethylene)	mg/l	5	30	NT	NT	NT	NT	NS	NS	NS	NT	NS
Trichlorofluoromethane	mg/l	5	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
1,2,3-Trichloropropane	mg/l	15	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Vinyl acetate	mg/l	50	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Vinyl chloride	mg/l	10	2.4	NT	NT	NT	NT	NS	NS	NS	NT	NS
Xylene	mg/l	5	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS

Notes:
MCL = Maximum Contaminant Level, as established in the NCDENR, "Redbook" Surface Waters and Wetlands Standards
Section 15A NCAC 02B.0100, .0200, and .0300.
ND = Not Detected at the method detection limit
NS = Not Sampled
NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
NP = Not Present during sampling event
Shaded cells indicate exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Surface Water Sampling Event (4-9-2001)

TEST	UNITS	MDL	MCL	SW-1	SW-2	SW-3	SW-5	SW-6	SW-7	Leachate	Settling
pH	pH units (on-site)	-	<6.0; >9.0	**7**	**7.1**	**7.1**	NS	NS	NS	**8.1**	NS
Specific Conductance	mmhos/cm (on-site)	1	NE	**73**	**80**	**75**	NS	NS	NS	**3600**	NS
Temperature	°C (on-site)	-	29	**11**	**13**	**18**	NS	NS	NS	**15**	NS
Turbidity	NTU (on-site)	0.1	50	NT	NT	NT	NS	NS	NS	NT	NS
Nitrate as N	mg/l	0.1	NE	NT	NT	NT	NS	NS	NS	NT	NS
Nitrate/Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NS	NS	NS	ND	NS
Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NS	NS	NS	NT	NS
Nitrogen	mg/l	0.2	NE	NT	NT	NT	NS	NS	NS	**120**	NS
Total Nitrogen, Kjeldahl	mg/l	100	NE	NT	NT	NT	NS	NS	NS	**120**	NS
Sulfate	mg/l	500	NE	NT	NT	NT	NS	NS	NS	NT	NS
Biochemical Oxygen Demand	mg/l	2	NE	NT	NT	NT	NS	NS	NS	**240**	NS
Chemical Oxygen Demand	mg/l	25	NE	NT	NT	NT	NS	NS	NS	**430**	NS
Total Dissolved Solids	mg/l	20	NE	NT	NT	NT	NS	NS	NS	**5000**	NS
Cyanide	mg/l	2	5	NT	NT	NT	NS	NS	NS	ND	NS
Total Antimony (Sb)	mg/l	30	NE	ND	ND	ND	NS	NS	NS	NT	NS
Total Arsenic (As)	mg/l	10	10	ND	ND	ND	NS	NS	NS	NT	NS
Total Barium (Ba)	mg/l	500	NE	**99**	**81**	**55**	NS	NS	NS	NT	NS
Total Beryllium (Be)	mg/l	2	6.5	ND	ND	ND	NS	NS	NS	NT	NS
Total Cadmium (Cd)	mg/l	1	0.4	ND	ND	ND	NS	NS	NS	NT	NS
Total Chromium (Cr)	mg/l	10	50	ND	ND	ND	NS	NS	NS	**10**	NS
Total Cobalt (Co)	mg/l	10	NE	ND	ND	ND	NS	NS	NS	NT	NS
Total Copper (Cu)	mg/l	200	7	ND	ND	ND	NS	NS	NS	NT	NS
Total Lead (Pb)	mg/l	10	25	ND	ND	ND	NS	NS	NS	ND	NS
Total Nickel (Ni)	mg/l	50	88	ND	ND	ND	NS	NS	NS	NT	NS
Total Selenium (Se)	mg/l	20	5	ND	ND	ND	NS	NS	NS	**210**	NS
Total Silver (Ag)	mg/l	10	0.06	ND	ND	ND	NS	NS	NS	NT	NS
Total Thallium (Tl)	mg/l	10	NE	ND	ND	ND	NS	NS	NS	ND	NS
Total Vanadium (V)	mg/l	40	NE	ND	ND	ND	NS	NS	NS	NT	NS
Total Zinc (Zn)	mg/l	50	50	**15**	**31**	**20**	NS	NS	NS	NT	NS
Mercury	mg/l	0.2	0.012	NT	NT	NT	NS	NS	NS	ND	NS
Acetone	mg/l	100	NE	NT	NT	NT	NS	NS	NS	NT	NS
Acrylonitrile	mg/l	200	NE	NT	NT	NT	NS	NS	NS	NT	NS
Benzene	mg/l	5	51	NT	NT	NT	NS	NS	NS	NT	NS
Bromochloromethane	mg/l	5	NE	NT	NT	NT	NS	NS	NS	NT	NS
Bromodichloromethane	mg/l	5	NE	NT	NT	NT	NS	NS	NS	NT	NS
Bromoform	mg/l	5	NE	NT	NT	NT	NS	NS	NS	NT	NS
Carbon Disulfide	mg/l	100	NE	NT	NT	NT	NS	NS	NS	NT	NS
Bromomethane (Methylbromide)	mg/l	10	NE	NT	NT	NT	NS	NS	NS	NT	NS
Carbon tetrachloride	mg/l	10	1.6	NT	NT	NT	NS	NS	NS	NT	NS
Chlorobenzene (mono)	mg/l	5	NE	NT	NT	NT	NS	NS	NS	NT	NS
Chloroethane	mg/l	10	NE	NT	NT	NT	NS	NS	NS	NT	NS
Chloroform	mg/l	5	NE	NT	NT	NT	NS	NS	NS	NT	NS
Chloromethane (Methylchloride)	mg/l	10	NE	NT	NT	NT	NS	NS	NS	NT	NS
Dibromochloromethane	mg/l	5	NE	NT	NT	NT	NS	NS	NS	NT	NS
1,2-Dibromo-3-chloropropane; DBCP	mg/l	25	NE	NT	NT	NT	NS	NS	NS	NT	NS
1,2-Dibromoethane; Ethylene dibromide	mg/l	5	NE	NT	NT	NT	NS	NS	NS	NT	NS
Dibromomethane	mg/l	10	NE	NT	NT	NT	NS	NS	NS	NT	NS
1,2-Dichlorobenzene	mg/l	5	NE	NT	NT	NT	NS	NS	NS	NT	NS
1,4-Dichlorobenzene	mg/l	5	NE	NT	NT	NT	NS	NS	NS	NT	NS
trans-1,4-Dichloro-2butene	mg/l	100	NE	NT	NT	NT	NS	NS	NS	NT	NS
1,1-Dichloroethane	mg/l	5	NE	NT	NT	NT	NS	NS	NS	NT	NS
1,2-Dichloroethane	mg/l	5	NE	NT	NT	NT	NS	NS	NS	NT	NS
1,1-Dichloroethene (-ethylene)	mg/l	5	NE	NT	NT	NT	NS	NS	NS	NT	NS
cis-1,2-Dichloroethene (-ethylene)	mg/l	5	NE	NT	NT	NT	NS	NS	NS	NT	NS
trans-1,2-Dichloroethene (-ylene)	mg/l	5	NE	NT	NT	NT	NS	NS	NS	NT	NS
1,2-Dichloropropane	mg/l	5	NE	NT	NT	NT	NS	NS	NS	NT	NS
cis-1,3-Dichloropropene (-propylene)	mg/l	10	NE	NT	NT	NT	NS	NS	NS	NT	NS
trans-1,3-Dichloropropene (-propylene)	mg/l	10	NE	NT	NT	NT	NS	NS	NS	NT	NS
Ethylbenzene	mg/l	5	NE	NT	NT	NT	NS	NS	NS	NT	NS
2-Hexanone	mg/l	50	NE	NT	NT	NT	NS	NS	NS	NT	NS
Iodomethane	mg/l	10	NE	NT	NT	NT	NS	NS	NS	NT	NS
Dichloromethane (Methylene chloride)	mg/l	10	NE	NT	NT	NT	NS	NS	NS	NT	NS
2-Butanone (Methyl ethyl ketone)	mg/l	100	NE	NT	NT	NT	NS	NS	NS	NT	NS
4-Methyl-2-Pentanone	mg/l	100	NE	NT	NT	NT	NS	NS	NS	NT	NS
Styrene	mg/l	10	NE	NT	NT	NT	NS	NS	NS	NT	NS
1,1,1,2-Tetrachloroethane	mg/l	5	NE	NT	NT	NT	NS	NS	NS	NT	NS
1,1,2,2-Tetrachloroethane	mg/l	5	4	NT	NT	NT	NS	NS	NS	NT	NS
Tetrachloroethene (-ethylene)	mg/l	5	3.3	NT	NT	NT	NS	NS	NS	NT	NS
Toluene	mg/l	5	0.36	NT	NT	NT	NS	NS	NS	NT	NS
1,1,1-Trichloroethane	mg/l	5	NE	NT	NT	NT	NS	NS	NS	NT	NS
1,1,2-Trichloroethane	mg/l	5	NE	NT	NT	NT	NS	NS	NS	NT	NS
Trichloroethene (-ethylene)	mg/l	5	30	NT	NT	NT	NS	NS	NS	NT	NS
Trichlorofluoromethane	mg/l	5	NE	NT	NT	NT	NS	NS	NS	NT	NS
1,2,3-Trichloropropane	mg/l	15	NE	NT	NT	NT	NS	NS	NS	NT	NS
Vinyl acetate	mg/l	50	NE	NT	NT	NT	NS	NS	NS	NT	NS
Vinyl chloride	mg/l	10	2.4	NT	NT	NT	NS	NS	NS	NT	NS
Xylene	mg/l	5	NE	NT	NT	NT	NS	NS	NS	NT	NS

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NS = Not Sampled
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NE = Not Established; North Carolina has not established a MCL
NP = Not Present during sampling event
Shaded cells indicate exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Surface Water Sampling Event (9-18-2001)

TEST	UNITS	MDL	MCL	SW-1	SW-2	SW-3	SW-5	SW-6	SW-7	Leachate	Settling
pH	pH units (on-site)	-	<6.0; >9.0	NS	NS	NS	**7.48**	NS	NS	NS	**6.02**
Specific Conductance	mmhos/cm (on-site)	1	NE	NS	NS	NS	**160**	NS	NS	NS	**120**
Temperature	°C (on-site)	-	29	NS	NS	NS	**20**	NS	NS	NS	**19**
Turbidity	NTU (on-site)	0.1	50	NS	NS	NS	NT	NS	NS	NS	NT
Nitrate as N	mg/l	0.1	NE	NS	NS	NS	NT	NS	NS	NS	NT
Nitrate/Nitrite as N	mg/l	0.1	NE	NS	NS	NS	NT	NS	NS	NS	NT
Nitrite as N	mg/l	0.1	NE	NS	NS	NS	NT	NS	NS	NS	NT
Nitrogen	mg/l	0.2	NE	NS	NS	NS	NT	NS	NS	NS	NT
Total Nitrogen, Kjeldahl	mg/l	100	NE	NS	NS	NS	NT	NS	NS	NS	NT
Sulfate	mg/l	500	NE	NS	NS	NS	NT	NS	NS	NS	NT
Biochemical Oxygen Demand	mg/l	2	NE	NS	NS	NS	NT	NS	NS	NS	NT
Chemical Oxygen Demand	mg/l	25	NE	NS	NS	NS	NT	NS	NS	NS	NT
Total Dissolved Solids	mg/l	20	NE	NS	NS	NS	NT	NS	NS	NS	NT
Cyanide	mg/l	2	5	NS	NS	NS	NT	NS	NS	NS	NT
Total Antimony (Sb)	mg/l	30	NE	NS	NS	NS	ND	NS	NS	NS	ND
Total Arsenic (As)	mg/l	10	10	NS	NS	NS	ND	NS	NS	NS	ND
Total Barium (Ba)	mg/l	500	NE	NS	NS	NS	**71**	NS	NS	NS	**110**
Total Beryllium (Be)	mg/l	2	6.5	NS	NS	NS	ND	NS	NS	NS	ND
Total Cadmium (Cd)	mg/l	1	0.4	NS	NS	NS	ND	NS	NS	NS	ND
Total Chromium (Cr)	mg/l	10	50	NS	NS	NS	ND	NS	NS	NS	ND
Total Cobalt (Co)	mg/l	10	NE	NS	NS	NS	**7.2**	NS	NS	NS	**13**
Total Copper (Cu)	mg/l	200	7	NS	NS	NS	ND	NS	NS	NS	ND
Total Lead (Pb)	mg/l	10	25	NS	NS	NS	ND	NS	NS	NS	ND
Total Nickel (Ni)	mg/l	50	88	NS	NS	NS	**9.4**	NS	NS	NS	**8.1**
Total Selenium (Se)	mg/l	20	5	NS	NS	NS	ND	NS	NS	NS	ND
Total Silver (Ag)	mg/l	10	0.06	NS	NS	NS	ND	NS	NS	NS	ND
Total Thallium (Tl)	mg/l	10	NE	NS	NS	NS	ND	NS	NS	NS	ND
Total Vanadium (V)	mg/l	40	NE	NS	NS	NS	ND	NS	NS	NS	ND
Total Zinc (Zn)	mg/l	50	50	NS	NS	NS	**11**	NS	NS	NS	**35**
Mercury	mg/l	0.2	0.012	NS	NS	NS	NT	NS	NS	NS	NT
Acetone	mg/l	100	NE	NS	NS	NS	NT	NS	NS	NS	NT
Acrylonitrile	mg/l	200	NE	NS	NS	NS	NT	NS	NS	NS	NT
Benzene	mg/l	5	51	NS	NS	NS	NT	NS	NS	NS	NT
Bromochloromethane	mg/l	5	NE	NS	NS	NS	NT	NS	NS	NS	NT
Bromodichloromethane	mg/l	5	NE	NS	NS	NS	NT	NS	NS	NS	NT
Bromoform	mg/l	5	NE	NS	NS	NS	NT	NS	NS	NS	NT
Carbon Disulfide	mg/l	100	NE	NS	NS	NS	NT	NS	NS	NS	NT
Bromomethane (Methylbromide)	mg/l	10	NE	NS	NS	NS	NT	NS	NS	NS	NT
Carbon tetrachloride	mg/l	10	1.6	NS	NS	NS	NT	NS	NS	NS	NT
Chlorobenzene (mono)	mg/l	5	NE	NS	NS	NS	NT	NS	NS	NS	NT
Chloroethane	mg/l	10	NE	NS	NS	NS	NT	NS	NS	NS	NT
Chloroform	mg/l	5	NE	NS	NS	NS	NT	NS	NS	NS	NT
Chloromethane (Methylchloride)	mg/l	10	NE	NS	NS	NS	NT	NS	NS	NS	NT
Dibromochloromethane	mg/l	5	NE	NS	NS	NS	NT	NS	NS	NS	NT
1,2-Dibromo-3-chloropropane; DBCP	mg/l	25	NE	NS	NS	NS	NT	NS	NS	NS	NT
1,2-Dibromoethane; Ethylene dibromide	mg/l	5	NE	NS	NS	NS	NT	NS	NS	NS	NT
Dibromomethane	mg/l	10	NE	NS	NS	NS	NT	NS	NS	NS	NT
1,2-Dichlorobenzene	mg/l	5	NE	NS	NS	NS	NT	NS	NS	NS	NT
1,4-Dichlorobenzene	mg/l	5	NE	NS	NS	NS	NT	NS	NS	NS	NT
trans-1,4-Dichloro-2butene	mg/l	100	NE	NS	NS	NS	NT	NS	NS	NS	NT
1,1-Dichloroethane	mg/l	5	NE	NS	NS	NS	NT	NS	NS	NS	NT
1,2-Dichloroethane	mg/l	5	NE	NS	NS	NS	NT	NS	NS	NS	NT
1,1-Dichloroethene (-ethylene)	mg/l	5	NE	NS	NS	NS	NT	NS	NS	NS	NT
cis-1,2-Dichloroethene (-ethylene)	mg/l	5	NE	NS	NS	NS	NT	NS	NS	NS	NT
trans-1,2-Dichloroethene (-ylene)	mg/l	5	NE	NS	NS	NS	NT	NS	NS	NS	NT
1,2-Dichloropropane	mg/l	5	NE	NS	NS	NS	NT	NS	NS	NS	NT
cis-1,3-Dichloropropene (-propylene)	mg/l	10	NE	NS	NS	NS	NT	NS	NS	NS	NT
trans-1,3-Dichloropropene (-propylene)	mg/l	10	NE	NS	NS	NS	NT	NS	NS	NS	NT
Ethylbenzene	mg/l	5	NE	NS	NS	NS	NT	NS	NS	NS	NT
2-Hexanone	mg/l	50	NE	NS	NS	NS	NT	NS	NS	NS	NT
Iodomethane	mg/l	10	NE	NS	NS	NS	NT	NS	NS	NS	NT
Dichloromethane (Methylene chloride)	mg/l	10	NE	NS	NS	NS	NT	NS	NS	NS	NT
2-Butanone (Methyl ethyl ketone)	mg/l	100	NE	NS	NS	NS	NT	NS	NS	NS	NT
4-Methyl-2-Pentanone	mg/l	100	NE	NS	NS	NS	NT	NS	NS	NS	NT
Styrene	mg/l	10	NE	NS	NS	NS	NT	NS	NS	NS	NT
1,1,1,2-Tetrachloroethane	mg/l	5	NE	NS	NS	NS	NT	NS	NS	NS	NT
1,1,2,2-Tetrachloroethane	mg/l	5	4	NS	NS	NS	NT	NS	NS	NS	NT
Tetrachloroethene (-ethylene)	mg/l	5	3.3	NS	NS	NS	NT	NS	NS	NS	NT
Toluene	mg/l	5	0.36	NS	NS	NS	NT	NS	NS	NS	NT
1,1,1-Trichloroethane	mg/l	5	NE	NS	NS	NS	NT	NS	NS	NS	NT
1,1,2-Trichloroethane	mg/l	5	NE	NS	NS	NS	NT	NS	NS	NS	NT
Trichloroethene (-ethylene)	mg/l	5	30	NS	NS	NS	NT	NS	NS	NS	NT
Trichlorofluoromethane	mg/l	5	NE	NS	NS	NS	NT	NS	NS	NS	NT
1,2,3-Trichloropropane	mg/l	15	NE	NS	NS	NS	NT	NS	NS	NS	NT
Vinyl acetate	mg/l	50	NE	NS	NS	NS	NT	NS	NS	NS	NT
Vinyl chloride	mg/l	10	2.4	NS	NS	NS	NT	NS	NS	NS	NT
Xylene	mg/l	5	NE	NS	NS	NS	NT	NS	NS	NS	NT

Notes:
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Shaded cells indicate exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Surface Water Sampling Event (4-15-2002)

TEST	UNITS	MDL	MCL	SW-1	SW-2	SW-3	SW-5	SW-6	SW-7	Leachate	Settling
pH	pH units (on-site)	-	<6.0; >9.0	**6.67**	**6.08**	**6.46**	**7**	NS	NS	**6.71**	NT
Specific Conductance	mmhos/cm (on-site)	1	NE	**78**	**78**	**80**	**170**	NS	NS	**265**	NT
Temperature	°C (on-site)	-	29	**17.8**	**13.3**	**19.4**	**20**	NS	NS	**20.1**	NT
Turbidity	NTU (on-site)	0.1	50	NT	NT	NT	NT	NS	NS	NT	NT
Nitrate as N	mg/l	0.1	NE	NT	NT	NT	NT	NS	NS	NT	NT
Nitrate/Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NS	NS	**0.3**	NT
Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NS	NS	NT	NT
Nitrogen	mg/l	0.2	NE	NT	NT	NT	NT	NS	NS	**96**	NT
Total Nitrogen, Kjeldahl	mg/l	100	NE	NT	NT	NT	NT	NS	NS	**96**	NT
Sulfate	mg/l	500	NE	NT	NT	NT	NT	NS	NS	NT	NT
Biochemical Oxygen Demand	mg/l	2	NE	NT	NT	NT	NT	NS	NS	**740**	NT
Chemical Oxygen Demand	mg/l	25	NE	NT	NT	NT	NT	NS	NS	**1400**	NT
Total Dissolved Solids	mg/l	20	NE	NT	NT	NT	NT	NS	NS	**2300**	NT
Cyanide	mg/l	2	5	NT	NT	NT	NT	NS	NS	**0.006**	NT
Total Antimony (Sb)	mg/l	30	NE	ND	ND	ND	ND	NS	NS	NT	NT
Total Arsenic (As)	mg/l	10	10	ND	ND	ND	ND	NS	NS	NT	NT
Total Barium (Ba)	mg/l	500	NE	**92**	**91**	**40**	**140**	NS	NS	NT	NT
Total Beryllium (Be)	mg/l	2	6.5	ND	ND	ND	ND	NS	NS	NT	NT
Total Cadmium (Cd)	mg/l	1	0.4	ND	ND	ND	ND	NS	NS	NT	NT
Total Chromium (Cr)	mg/l	10	50	ND	ND	ND	ND	NS	NS	**34**	NT
Total Cobalt (Co)	mg/l	10	NE	ND	ND	ND	**7.7**	NS	NS	NT	NT
Total Copper (Cu)	mg/l	200	7	ND	ND	ND	ND	NS	NS	NT	NT
Total Lead (Pb)	mg/l	10	25	ND	ND	ND	ND	NS	NS	ND	NT
Total Nickel (Ni)	mg/l	50	88	ND	ND	ND	**9**	NS	NS	NT	NT
Total Selenium (Se)	mg/l	20	5	ND	ND	ND	ND	NS	NS	ND	NT
Total Silver (Ag)	mg/l	10	0.06	ND	ND	ND	ND	NS	NS	NT	NT
Total Thallium (Tl)	mg/l	10	NE	ND	ND	ND	ND	NS	NS	ND	NT
Total Vanadium (V)	mg/l	40	NE	ND	ND	ND	**6.5**	NS	NS	NT	NT
Total Zinc (Zn)	mg/l	50	50	ND	**37**	**32**	**60**	NS	NS	NT	NT
Mercury	mg/l	0.2	0.012	NT	NT	NT	NT	NS	NS	ND	NT
Acetone	mg/l	100	NE	NT	NT	NT	NT	NS	NS	NT	NT
Acrylonitrile	mg/l	200	NE	NT	NT	NT	NT	NS	NS	NT	NT
Benzene	mg/l	5	51	NT	NT	NT	NT	NS	NS	NT	NT
Bromochloromethane	mg/l	5	NE	NT	NT	NT	NT	NS	NS	NT	NT
Bromodichloromethane	mg/l	5	NE	NT	NT	NT	NT	NS	NS	NT	NT
Bromoform	mg/l	5	NE	NT	NT	NT	NT	NS	NS	NT	NT
Carbon Disulfide	mg/l	100	NE	NT	NT	NT	NT	NS	NS	NT	NT
Bromomethane (Methylbromide)	mg/l	10	NE	NT	NT	NT	NT	NS	NS	NT	NT
Carbon tetrachloride	mg/l	10	1.6	NT	NT	NT	NT	NS	NS	NT	NT
Chlorobenzene (mono)	mg/l	5	NE	NT	NT	NT	NT	NS	NS	NT	NT
Chloroethane	mg/l	10	NE	NT	NT	NT	NT	NS	NS	NT	NT
Chloroform	mg/l	5	NE	NT	NT	NT	NT	NS	NS	NT	NT
Chloromethane (Methylchloride)	mg/l	10	NE	NT	NT	NT	NT	NS	NS	NT	NT
Dibromochloromethane	mg/l	5	NE	NT	NT	NT	NT	NS	NS	NT	NT
1,2-Dibromo-3-chloropropane; DBCP	mg/l	25	NE	NT	NT	NT	NT	NS	NS	NT	NT
1,2-Dibromoethane; Ethylene dibromide	mg/l	5	NE	NT	NT	NT	NT	NS	NS	NT	NT
Dibromomethane	mg/l	10	NE	NT	NT	NT	NT	NS	NS	NT	NT
1,2-Dichlorobenzene	mg/l	5	NE	NT	NT	NT	NT	NS	NS	NT	NT
1,4-Dichlorobenzene	mg/l	5	NE	NT	NT	NT	NT	NS	NS	NT	NT
trans-1,4-Dichloro-2butene	mg/l	100	NE	NT	NT	NT	NT	NS	NS	NT	NT
1,1-Dichloroethane	mg/l	5	NE	NT	NT	NT	NT	NS	NS	NT	NT
1,2-Dichloroethane	mg/l	5	NE	NT	NT	NT	NT	NS	NS	NT	NT
1,1-Dichloroethene (-ethylene)	mg/l	5	NE	NT	NT	NT	NT	NS	NS	NT	NT
cis-1,2-Dichloroethene (-ethylene)	mg/l	5	NE	NT	NT	NT	NT	NS	NS	NT	NT
trans-1,2-Dichloroethene (-ylene)	mg/l	5	NE	NT	NT	NT	NT	NS	NS	NT	NT
1,2-Dichloropropane	mg/l	5	NE	NT	NT	NT	NT	NS	NS	NT	NT
cis-1,3-Dichloropropene (-propylene)	mg/l	10	NE	NT	NT	NT	NT	NS	NS	NT	NT
trans-1,3-Dichloropropene (-propylene)	mg/l	10	NE	NT	NT	NT	NT	NS	NS	NT	NT
Ethylbenzene	mg/l	5	NE	NT	NT	NT	NT	NS	NS	NT	NT
2-Hexanone	mg/l	50	NE	NT	NT	NT	NT	NS	NS	NT	NT
Iodomethane	mg/l	10	NE	NT	NT	NT	NT	NS	NS	NT	NT
Dichloromethane (Methylene chloride)	mg/l	10	NE	NT	NT	NT	NT	NS	NS	NT	NT
2-Butanone (Methyl ethyl ketone)	mg/l	100	NE	NT	NT	NT	NT	NS	NS	NT	NT
4-Methyl-2-Pentanone	mg/l	100	NE	NT	NT	NT	NT	NS	NS	NT	NT
Styrene	mg/l	10	NE	NT	NT	NT	NT	NS	NS	NT	NT
1,1,1,2-Tetrachloroethane	mg/l	5	NE	NT	NT	NT	NT	NS	NS	NT	NT
1,1,2,2-Tetrachloroethane	mg/l	5	4	NT	NT	NT	NT	NS	NS	NT	NT
Tetrachloroethene (-ethylene)	mg/l	5	3.3	NT	NT	NT	NT	NS	NS	NT	NT
Toluene	mg/l	5	0.36	NT	NT	NT	NT	NS	NS	NT	NT
1,1,1-Trichloroethane	mg/l	5	NE	NT	NT	NT	NT	NS	NS	NT	NT
1,1,2-Trichloroethane	mg/l	5	NE	NT	NT	NT	NT	NS	NS	NT	NT
Trichloroethene (-ethylene)	mg/l	5	30	NT	NT	NT	NT	NS	NS	NT	NT
Trichlorofluoromethane	mg/l	5	NE	NT	NT	NT	NT	NS	NS	NT	NT
1,2,3-Trichloropropane	mg/l	15	NE	NT	NT	NT	NT	NS	NS	NT	NT
Vinyl acetate	mg/l	50	NE	NT	NT	NT	NT	NS	NS	NT	NT
Vinyl chloride	mg/l	10	2.4	NT	NT	NT	NT	NS	NS	NT	NT
Xylene	mg/l	5	NE	NT	NT	NT	NT	NS	NS	NT	NT

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White Oak Landfill - Haywood Co., NC
Surface Water Sampling Event (9-26-2002)

TEST	UNITS	MDL	MCL	SW-1	SW-2	SW-3	SW-5	SW-6	SW-7	Leachate	Settling
pH	pH units (on-site)	-	<6.0; >9.0	**6.9**	**6.88**	**7.01**	NS	NS	NS	**7.48**	NS
Specific Conductance	mmhos/cm (on-site)	1	NE	**102**	**151**	**115**	NS	NS	NS	**3700**	NS
Temperature	°C (on-site)	-	29	**16.5**	**17.2**	**17.5**	NS	NS	NS	**18.4**	NS
Turbidity	NTU (on-site)	0.1	50	NT	NT	NT	NS	NS	NS	NT	NS
Nitrate as N	mg/l	0.1	NE	NT	NT	NT	NS	NS	NS	NT	NS
Nitrate/Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NS	NS	NS	ND	NS
Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NS	NS	NS	NT	NS
Nitrogen	mg/l	0.2	NE	NT	NT	NT	NS	NS	NS	ND	NS
Total Nitrogen, Kjeldahl	mg/l	100	NE	NT	NT	NT	NS	NS	NS	**130**	NS
Sulfate	mg/l	500	NE	NT	NT	NT	NS	NS	NS	NT	NS
Biochemical Oxygen Demand	mg/l	2	NE	NT	NT	NT	NS	NS	NS	**210**	NS
Chemical Oxygen Demand	mg/l	25	NE	NT	NT	NT	NS	NS	NS	**1300**	NS
Total Dissolved Solids	mg/l	20	NE	NT	NT	NT	NS	NS	NS	**3000**	NS
Cyanide	mg/l	2	5	NT	NT	NT	NS	NS	NS	**2.5**	NS
Total Antimony (Sb)	mg/l	30	NE	ND	ND	ND	NS	NS	NS	NT	NS
Total Arsenic (As)	mg/l	10	10	ND	ND	ND	NS	NS	NS	NT	NS
Total Barium (Ba)	mg/l	500	NE	**150**	**160**	**80**	NS	NS	NS	NT	NS
Total Beryllium (Be)	mg/l	2	6.5	ND	ND	ND	NS	NS	NS	NT	NS
Total Cadmium (Cd)	mg/l	1	0.4	ND	ND	ND	NS	NS	NS	NT	NS
Total Chromium (Cr)	mg/l	10	50	ND	ND	ND	NS	NS	NS	**34**	NS
Total Cobalt (Co)	mg/l	10	NE	**7.2**	ND	ND	NS	NS	NS	NT	NS
Total Copper (Cu)	mg/l	200	7	ND	**4.5**	**2.7**	NS	NS	NS	NT	NS
Total Lead (Pb)	mg/l	10	25	ND	ND	ND	NS	NS	NS	ND	NS
Total Nickel (Ni)	mg/l	50	88	ND	ND	ND	NS	NS	NS	NT	NS
Total Selenium (Se)	mg/l	20	5	ND	ND	ND	NS	NS	NS	ND	NS
Total Silver (Ag)	mg/l	10	0.06	ND	ND	ND	NS	NS	NS	NT	NS
Total Thallium (Tl)	mg/l	10	NE	ND	ND	ND	NS	NS	NS	ND	NS
Total Vanadium (V)	mg/l	40	NE	ND	**6.4**	ND	NS	NS	NS	NT	NS
Total Zinc (Zn)	mg/l	50	50	**19**	**100**	**41**	NS	NS	NS	NT	NS
Mercury	mg/l	0.2	0.012	NT	NT	NT	NS	NS	NS	ND	NS
Acetone	mg/l	100	NE	NT	NT	NT	NS	NS	NS	NT	NS
Acrylonitrile	mg/l	200	NE	NT	NT	NT	NS	NS	NS	NT	NS
Benzene	mg/l	5	51	NT	NT	NT	NS	NS	NS	NT	NS
Bromochloromethane	mg/l	5	NE	NT	NT	NT	NS	NS	NS	NT	NS
Bromodichloromethane	mg/l	5	NE	NT	NT	NT	NS	NS	NS	NT	NS
Bromoform	mg/l	5	NE	NT	NT	NT	NS	NS	NS	NT	NS
Carbon Disulfide	mg/l	100	NE	NT	NT	NT	NS	NS	NS	NT	NS
Bromomethane (Methylbromide)	mg/l	10	NE	NT	NT	NT	NS	NS	NS	NT	NS
Carbon tetrachloride	mg/l	10	1.6	NT	NT	NT	NS	NS	NS	NT	NS
Chlorobenzene (mono)	mg/l	5	NE	NT	NT	NT	NS	NS	NS	NT	NS
Chloroethane	mg/l	10	NE	NT	NT	NT	NS	NS	NS	NT	NS
Chloroform	mg/l	5	NE	NT	NT	NT	NS	NS	NS	NT	NS
Chloromethane (Methylchloride)	mg/l	10	NE	NT	NT	NT	NS	NS	NS	NT	NS
Dibromochloromethane	mg/l	5	NE	NT	NT	NT	NS	NS	NS	NT	NS
1,2-Dibromo-3-chloropropane; DBCP	mg/l	25	NE	NT	NT	NT	NS	NS	NS	NT	NS
1,2-Dibromoethane; Ethylene dibromide	mg/l	5	NE	NT	NT	NT	NS	NS	NS	NT	NS
Dibromomethane	mg/l	10	NE	NT	NT	NT	NS	NS	NS	NT	NS
1,2-Dichlorobenzene	mg/l	5	NE	NT	NT	NT	NS	NS	NS	NT	NS
1,4-Dichlorobenzene	mg/l	5	NE	NT	NT	NT	NS	NS	NS	NT	NS
trans-1,4-Dichloro-2butene	mg/l	100	NE	NT	NT	NT	NS	NS	NS	NT	NS
1,1-Dichloroethane	mg/l	5	NE	NT	NT	NT	NS	NS	NS	NT	NS
1,2-Dichloroethane	mg/l	5	NE	NT	NT	NT	NS	NS	NS	NT	NS
1,1-Dichloroethene (-ethylene)	mg/l	5	NE	NT	NT	NT	NS	NS	NS	NT	NS
cis-1,2-Dichloroethene (-ethylene)	mg/l	5	NE	NT	NT	NT	NS	NS	NS	NT	NS
trans-1,2-Dichloroethene (-ylene)	mg/l	5	NE	NT	NT	NT	NS	NS	NS	NT	NS
1,2-Dichloropropane	mg/l	5	NE	NT	NT	NT	NS	NS	NS	NT	NS
cis-1,3-Dichloropropene (-propylene)	mg/l	10	NE	NT	NT	NT	NS	NS	NS	NT	NS
trans-1,3-Dichloropropene (-propylene)	mg/l	10	NE	NT	NT	NT	NS	NS	NS	NT	NS
Ethylbenzene	mg/l	5	NE	NT	NT	NT	NS	NS	NS	NT	NS
2-Hexanone	mg/l	50	NE	NT	NT	NT	NS	NS	NS	NT	NS
Iodomethane	mg/l	10	NE	NT	NT	NT	NS	NS	NS	NT	NS
Dichloromethane (Methylene chloride)	mg/l	10	NE	NT	NT	NT	NS	NS	NS	NT	NS
2-Butanone (Methyl ethyl ketone)	mg/l	100	NE	NT	NT	NT	NS	NS	NS	NT	NS
4-Methyl-2-Pentanone	mg/l	100	NE	NT	NT	NT	NS	NS	NS	NT	NS
Styrene	mg/l	10	NE	NT	NT	NT	NS	NS	NS	NT	NS
1,1,1,2-Tetrachloroethane	mg/l	5	NE	NT	NT	NT	NS	NS	NS	NT	NS
1,1,2,2-Tetrachloroethane	mg/l	5	4	NT	NT	NT	NS	NS	NS	NT	NS
Tetrachloroethene (-ethylene)	mg/l	5	3.3	NT	NT	NT	NS	NS	NS	NT	NS
Toluene	mg/l	5	0.36	NT	NT	NT	NS	NS	NS	NT	NS
1,1,1-Trichloroethane	mg/l	5	NE	NT	NT	NT	NS	NS	NS	NT	NS
1,1,2-Trichloroethane	mg/l	5	NE	NT	NT	NT	NS	NS	NS	NT	NS
Trichloroethene (-ethylene)	mg/l	5	30	NT	NT	NT	NS	NS	NS	NT	NS
Trichlorofluoromethane	mg/l	5	NE	NT	NT	NT	NS	NS	NS	NT	NS
1,2,3-Trichloropropane	mg/l	15	NE	NT	NT	NT	NS	NS	NS	NT	NS
Vinyl acetate	mg/l	50	NE	NT	NT	NT	NS	NS	NS	NT	NS
Vinyl chloride	mg/l	10	2.4	NT	NT	NT	NS	NS	NS	NT	NS
Xylene	mg/l	5	NE	NT	NT	NT	NS	NS	NS	NT	NS

Notes:
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NE = Not Established; North Carolina has not established a MCL
NP = Not Present during sampling event
Shaded cells indicate exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Surface Water Sampling Event (4-29-2003)

TEST	UNITS	MDL	MCL	SW-1	SW-2	SW-3	SW-5	SW-6	SW-7	Leachate	Settling
pH	pH units (on-site)	-	<6.0; >9.0	**6.91**	**6.42**	**7.17**	NS	**6.41**	**6.71**	NT	**7.05**
Specific Conductance	mmhos/cm (on-site)	1	NE	**77**	**75**	**101**	NS	**19**	**29**	NT	**130**
Temperature	°C (on-site)	-	29	**11.8**	**13**	**16**	NS	**15.6**	**14.9**	NT	**23**
Turbidity	NTU (on-site)	0.1	50	NT	NT	NT	NS	NT	NT	NT	NT
Nitrate as N	mg/l	0.1	NE	NT	NT	NT	NS	NT	NT	NT	NT
Nitrate/Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NS	NT	NT	ND	NT
Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NS	NT	NT	NT	NT
Nitrogen	mg/l	0.2	NE	NT	NT	NT	NS	NT	NT	**220**	NT
Total Nitrogen, Kjeldahl	mg/l	100	NE	NT	NT	NT	NS	NT	NT	**220**	NT
Sulfate	mg/l	500	NE	NT	NT	NT	NS	NT	NT	NT	NT
Biochemical Oxygen Demand	mg/l	2	NE	NT	NT	NT	NS	NT	NT	**2500**	NT
Chemical Oxygen Demand	mg/l	25	NE	NT	NT	NT	NS	NT	NT	**1100**	NT
Total Dissolved Solids	mg/l	20	NE	NT	NT	NT	NS	NT	NT	**120**	NT
Cyanide	mg/l	2	5	NT	NT	NT	NS	NT	NT	**110**	NT
Total Antimony (Sb)	mg/l	30	NE	ND	ND	ND	NS	ND	ND	ND	ND
Total Arsenic (As)	mg/l	10	10	ND	ND	ND	NS	ND	ND	**15**	ND
Total Barium (Ba)	mg/l	500	NE	**90**	**82**	**64**	NS	**27**	**27**	**270**	**92**
Total Beryllium (Be)	mg/l	2	6.5	ND	ND	ND	NS	ND	ND	ND	ND
Total Cadmium (Cd)	mg/l	1	0.4	ND	ND	ND	NS	ND	ND	**2.5**	ND
Total Chromium (Cr)	mg/l	10	50	ND	ND	ND	NS	ND	ND	ND	ND
Total Cobalt (Co)	mg/l	10	NE	ND	ND	ND	NS	ND	ND	**16**	ND
Total Copper (Cu)	mg/l	200	7	ND	ND	ND	NS	ND	ND	ND	ND
Total Lead (Pb)	mg/l	10	25	ND	ND	ND	NS	ND	ND	ND	ND
Total Nickel (Ni)	mg/l	50	88	ND	ND	ND	NS	ND	ND	ND	ND
Total Selenium (Se)	mg/l	20	5	ND	ND	ND	NS	ND	ND	ND	ND
Total Silver (Ag)	mg/l	10	0.06	ND	ND	ND	NS	ND	ND	**2.4**	ND
Total Thallium (Tl)	mg/l	10	NE	ND	ND	ND	NS	ND	ND	ND	ND
Total Vanadium (V)	mg/l	40	NE	ND	ND	ND	NS	ND	ND	**19**	ND
Total Zinc (Zn)	mg/l	50	50	ND	**45**	**20**	NS	ND	ND	**1000**	ND
Mercury	mg/l	0.2	0.012	NT	NT	NT	NS	NT	NT	NT	NT
Acetone	mg/l	100	NE	NT	NT	NT	NS	NT	NT	NT	NT
Acrylonitrile	mg/l	200	NE	NT	NT	NT	NS	NT	NT	NT	NT
Benzene	mg/l	5	51	NT	NT	NT	NS	NT	NT	NT	NT
Bromochloromethane	mg/l	5	NE	NT	NT	NT	NS	NT	NT	NT	NT
Bromodichloromethane	mg/l	5	NE	NT	NT	NT	NS	NT	NT	NT	NT
Bromoform	mg/l	5	NE	NT	NT	NT	NS	NT	NT	NT	NT
Carbon Disulfide	mg/l	100	NE	NT	NT	NT	NS	NT	NT	NT	NT
Bromomethane (Methylbromide)	mg/l	10	NE	NT	NT	NT	NS	NT	NT	NT	NT
Carbon tetrachloride	mg/l	10	1.6	NT	NT	NT	NS	NT	NT	NT	NT
Chlorobenzene (mono)	mg/l	5	NE	NT	NT	NT	NS	NT	NT	NT	NT
Chloroethane	mg/l	10	NE	NT	NT	NT	NS	NT	NT	NT	NT
Chloroform	mg/l	5	NE	NT	NT	NT	NS	NT	NT	NT	NT
Chloromethane (Methylchloride)	mg/l	10	NE	NT	NT	NT	NS	NT	NT	NT	NT
Dibromochloromethane	mg/l	5	NE	NT	NT	NT	NS	NT	NT	NT	NT
1,2-Dibromo-3-chloropropane; DBCP	mg/l	25	NE	NT	NT	NT	NS	NT	NT	NT	NT
1,2-Dibromoethane; Ethylene dibromide	mg/l	5	NE	NT	NT	NT	NS	NT	NT	NT	NT
Dibromomethane	mg/l	10	NE	NT	NT	NT	NS	NT	NT	NT	NT
1,2-Dichlorobenzene	mg/l	5	NE	NT	NT	NT	NS	NT	NT	NT	NT
1,4-Dichlorobenzene	mg/l	5	NE	NT	NT	NT	NS	NT	NT	NT	NT
trans-1,4-Dichloro-2butene	mg/l	100	NE	NT	NT	NT	NS	NT	NT	NT	NT
1,1-Dichloroethane	mg/l	5	NE	NT	NT	NT	NS	NT	NT	NT	NT
1,2-Dichloroethane	mg/l	5	NE	NT	NT	NT	NS	NT	NT	NT	NT
1,1-Dichloroethene (-ethylene)	mg/l	5	NE	NT	NT	NT	NS	NT	NT	NT	NT
cis-1,2-Dichloroethene (-ethylene)	mg/l	5	NE	NT	NT	NT	NS	NT	NT	NT	NT
trans-1,2-Dichloroethene (-ylene)	mg/l	5	NE	NT	NT	NT	NS	NT	NT	NT	NT
1,2-Dichloropropane	mg/l	5	NE	NT	NT	NT	NS	NT	NT	NT	NT
cis-1,3-Dichloropropene (-propylene)	mg/l	10	NE	NT	NT	NT	NS	NT	NT	NT	NT
trans-1,3-Dichloropropene (-propylene)	mg/l	10	NE	NT	NT	NT	NS	NT	NT	NT	NT
Ethylbenzene	mg/l	5	NE	NT	NT	NT	NS	NT	NT	NT	NT
2-Hexanone	mg/l	50	NE	NT	NT	NT	NS	NT	NT	NT	NT
Iodomethane	mg/l	10	NE	NT	NT	NT	NS	NT	NT	NT	NT
Dichloromethane (Methylene chloride)	mg/l	10	NE	NT	NT	NT	NS	NT	NT	NT	NT
2-Butanone (Methyl ethyl ketone)	mg/l	100	NE	NT	NT	NT	NS	NT	NT	NT	NT
4-Methyl-2-Pentanone	mg/l	100	NE	NT	NT	NT	NS	NT	NT	NT	NT
Styrene	mg/l	10	NE	NT	NT	NT	NS	NT	NT	NT	NT
1,1,1,2-Tetrachloroethane	mg/l	5	NE	NT	NT	NT	NS	NT	NT	NT	NT
1,1,2,2-Tetrachloroethane	mg/l	5	4	NT	NT	NT	NS	NT	NT	NT	NT
Tetrachloroethene (-ethylene)	mg/l	5	3.3	NT	NT	NT	NS	NT	NT	NT	NT
Toluene	mg/l	5	0.36	NT	NT	NT	NS	NT	NT	NT	NT
1,1,1-Trichloroethane	mg/l	5	NE	NT	NT	NT	NS	NT	NT	NT	NT
1,1,2-Trichloroethane	mg/l	5	NE	NT	NT	NT	NS	NT	NT	NT	NT
Trichloroethene (-ethylene)	mg/l	5	30	NT	NT	NT	NS	NT	NT	NT	NT
Trichlorofluoromethane	mg/l	5	NE	NT	NT	NT	NS	NT	NT	NT	NT
1,2,3-Trichloropropane	mg/l	15	NE	NT	NT	NT	NS	NT	NT	NT	NT
Vinyl acetate	mg/l	50	NE	NT	NT	NT	NS	NT	NT	NT	NT
Vinyl chloride	mg/l	10	2.4	NT	NT	NT	NS	NT	NT	NT	NT
Xylene	mg/l	5	NE	NT	NT	NT	NS	NT	NT	NT	NT

Notes:
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Shaded cells indicate exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Surface Water Sampling Event (10-30-2003)

TEST	UNITS	MDL	MCL	SW-1	SW-2	SW-3	SW-5	SW-6	SW-7	Leachate	Settling
pH	pH units (on-site)	-	<6.0; >9.0	**7.41**	**7.38**	**7.42**	NS	**5.87**	**7.14**	**8.37**	NS
Specific Conductance	mmhos/cm (on-site)	1	NE	**80**	**80**	**80**	NS	**19**	**29**	**3500**	NS
Temperature	°C (on-site)	-	29	**12**	**12**	**12**	NS	**14.2**	**15.1**	**19.3**	NS
Turbidity	NTU (on-site)	0.1	50	NT	NT	NT	NS	NT	NT	NT	NS
Nitrate as N	mg/l	0.1	NE	NT	NT	NT	NS	NT	NT	**3.4**	NS
Nitrate/Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NS	NT	NT	**3.4**	NS
Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NS	NT	NT	NT	NS
Nitrogen	mg/l	0.2	NE	NT	NT	NT	NS	NT	NT	**72**	NS
Total Nitrogen, Kjeldahl	mg/l	100	NE	NT	NT	NT	NS	NT	NT	**69**	NS
Sulfate	mg/l	500	NE	NT	NT	NT	NS	NT	NT	NT	NS
Biochemical Oxygen Demand	mg/l	2	NE	NT	NT	NT	NS	NT	NT	ND	NS
Chemical Oxygen Demand	mg/l	25	NE	NT	NT	NT	NS	NT	NT	**250**	NS
Total Dissolved Solids	mg/l	20	NE	NT	NT	NT	NS	NT	NT	**2500**	NS
Cyanide	mg/l	2	5	NT	NT	NT	NS	NT	NT	NT	NS
Total Antimony (Sb)	mg/l	30	NE	ND	ND	ND	NS	ND	ND	NT	NS
Total Arsenic (As)	mg/l	10	10	ND	ND	ND	NS	**5.5**	ND	NT	NS
Total Barium (Ba)	mg/l	500	NE	**110**	**130**	**84**	NS	**24**	**27**	NT	NS
Total Beryllium (Be)	mg/l	2	6.5	ND	ND	ND	NS	ND	ND	NT	NS
Total Cadmium (Cd)	mg/l	1	0.4	ND	ND	ND	NS	ND	ND	NT	NS
Total Chromium (Cr)	mg/l	10	50	ND	ND	ND	NS	ND	ND	**10**	NS
Total Cobalt (Co)	mg/l	10	NE	ND	ND	ND	NS	ND	ND	NT	NS
Total Copper (Cu)	mg/l	200	7	ND	**2.7**	**2.2**	NS	**2.2**	ND	NT	NS
Total Lead (Pb)	mg/l	10	25	ND	ND	ND	NS	ND	ND	ND	NS
Total Nickel (Ni)	mg/l	50	88	ND	ND	ND	NS	ND	ND	NT	NS
Total Selenium (Se)	mg/l	20	5	ND	ND	ND	NS	ND	ND	ND	NS
Total Silver (Ag)	mg/l	10	0.06	ND	ND	ND	NS	ND	ND	NT	NS
Total Thallium (Tl)	mg/l	10	NE	ND	ND	ND	NS	ND	ND	ND	NS
Total Vanadium (V)	mg/l	40	NE	ND	**5.3**	ND	NS	ND	ND	NT	NS
Total Zinc (Zn)	mg/l	50	50	ND	**80**	**40**	NS	**14**	ND	NT	NS
Mercury	mg/l	0.2	0.012	NT	NT	NT	NS	NT	NT	ND	NS
Acetone	mg/l	100	NE	ND	ND	ND	NS	ND	ND	NT	NS
Acrylonitrile	mg/l	200	NE	ND	ND	ND	NS	ND	ND	NT	NS
Benzene	mg/l	5	51	ND	ND	ND	NS	ND	ND	NT	NS
Bromochloromethane	mg/l	5	NE	ND	ND	ND	NS	ND	ND	NT	NS
Bromodichloromethane	mg/l	5	NE	ND	ND	ND	NS	ND	ND	NT	NS
Bromoform	mg/l	5	NE	ND	ND	ND	NS	ND	ND	NT	NS
Carbon Disulfide	mg/l	100	NE	ND	ND	ND	NS	ND	**11**	NT	NS
Bromomethane (Methylbromide)	mg/l	10	NE	ND	ND	ND	NS	ND	ND	NT	NS
Carbon tetrachloride	mg/l	10	1.6	ND	ND	ND	NS	ND	ND	NT	NS
Chlorobenzene (mono)	mg/l	5	NE	ND	ND	ND	NS	ND	ND	NT	NS
Chloroethane	mg/l	10	NE	ND	ND	ND	NS	ND	ND	NT	NS
Chloroform	mg/l	5	NE	ND	ND	ND	NS	ND	ND	NT	NS
Chloromethane (Methylchloride)	mg/l	10	NE	ND	ND	ND	NS	ND	ND	NT	NS
Dibromochloromethane	mg/l	5	NE	ND	ND	ND	NS	ND	ND	NT	NS
1,2-Dibromo-3-chloropropane; DBCP	mg/l	25	NE	ND	ND	ND	NS	ND	ND	NT	NS
1,2-Dibromoethane; Ethylene dibromide	mg/l	5	NE	ND	ND	ND	NS	ND	ND	NT	NS
Dibromomethane	mg/l	10	NE	ND	ND	ND	NS	ND	ND	NT	NS
1,2-Dichlorobenzene	mg/l	5	NE	ND	ND	ND	NS	ND	ND	NT	NS
1,4-Dichlorobenzene	mg/l	5	NE	ND	ND	ND	NS	ND	ND	NT	NS
trans-1,4-Dichloro-2butene	mg/l	100	NE	ND	ND	ND	NS	ND	ND	NT	NS
1,1-Dichloroethane	mg/l	5	NE	ND	ND	ND	NS	ND	ND	NT	NS
1,2-Dichloroethane	mg/l	5	NE	ND	ND	ND	NS	ND	ND	NT	NS
1,1-Dichloroethene (-ethylene)	mg/l	5	NE	ND	ND	ND	NS	ND	ND	NT	NS
cis-1,2-Dichloroethene (-ethylene)	mg/l	5	NE	ND	ND	ND	NS	ND	ND	NT	NS
trans-1,2-Dichloroethene (-ylene)	mg/l	5	NE	ND	ND	ND	NS	ND	ND	NT	NS
1,2-Dichloropropane	mg/l	5	NE	ND	ND	ND	NS	ND	ND	NT	NS
cis-1,3-Dichloropropene (-propylene)	mg/l	10	NE	ND	ND	ND	NS	ND	ND	NT	NS
trans-1,3-Dichloropropene (-propylene)	mg/l	10	NE	ND	ND	ND	NS	ND	ND	NT	NS
Ethylbenzene	mg/l	5	NE	ND	ND	ND	NS	ND	ND	NT	NS
2-Hexanone	mg/l	50	NE	ND	ND	ND	NS	ND	ND	NT	NS
Iodomethane	mg/l	10	NE	ND	ND	ND	NS	ND	ND	NT	NS
Dichloromethane (Methylene chloride)	mg/l	10	NE	ND	ND	ND	NS	ND	ND	NT	NS
2-Butanone (Methyl ethyl ketone)	mg/l	100	NE	ND	ND	ND	NS	ND	ND	NT	NS
4-Methyl-2-Pentanone	mg/l	100	NE	ND	ND	ND	NS	ND	ND	NT	NS
Styrene	mg/l	10	NE	ND	ND	ND	NS	ND	ND	NT	NS
1,1,1,2-Tetrachloroethane	mg/l	5	NE	ND	ND	ND	NS	ND	ND	NT	NS
1,1,2,2-Tetrachloroethane	mg/l	5	4	ND	ND	ND	NS	ND	ND	NT	NS
Tetrachloroethene (-ethylene)	mg/l	5	3.3	ND	ND	ND	NS	ND	ND	NT	NS
Toluene	mg/l	5	0.36	ND	ND	ND	NS	ND	ND	NT	NS
1,1,1-Trichloroethane	mg/l	5	NE	ND	ND	ND	NS	ND	ND	NT	NS
1,1,2-Trichloroethane	mg/l	5	NE	ND	ND	ND	NS	ND	ND	NT	NS
Trichloroethene (-ethylene)	mg/l	5	30	ND	ND	ND	NS	ND	ND	NT	NS
Trichlorofluoromethane	mg/l	5	NE	ND	ND	ND	NS	ND	ND	NT	NS
1,2,3-Trichloropropane	mg/l	15	NE	ND	ND	ND	NS	ND	ND	NT	NS
Vinyl acetate	mg/l	50	NE	ND	ND	ND	NS	ND	ND	NT	NS
Vinyl chloride	mg/l	10	2.4	ND	ND	ND	NS	ND	ND	NT	NS
Xylene	mg/l	5	NE	ND	ND	ND	NS	ND	ND	NT	NS

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White Oak Landfill - Haywood Co., NC
Surface Water Sampling Event (4-20-2004)

TEST	UNITS	MDL	MCL	SW-1	SW-2	SW-3	SW-5	SW-6	SW-7	Leachate	Settling
pH	pH units (on-site)	-	<6.0; >9.0	**6.8**	**7.05**	**7.19**	**8.05**	**6.19**	**6.35**	**8.37**	NS
Specific Conductance	mmhos/cm (on-site)	1	NE	**74**	**73**	**142**	**1790**	**19**	**29**	**4050**	NS
Temperature	°C (on-site)	-	29	**13**	**13**	**15**	**17**	**17**	**16**	**28.4**	NS
Turbidity	NTU (on-site)	0.1	50	NT	NT	NT	NT	NT	NT	NT	NS
Nitrate as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	**0.11**	NS
Nitrate/Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	**0.11**	NS
Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	NT	NS
Nitrogen	mg/l	0.2	NE	NT	NT	NT	NT	NT	NT	NT	NS
Total Nitrogen, Kjeldahl	mg/l	100	NE	NT	NT	NT	NT	NT	NT	NT	NS
Sulfate	mg/l	500	NE	NT	NT	NT	NT	NT	NT	**640**	NS
Biochemical Oxygen Demand	mg/l	2	NE	NT	NT	NT	NT	NT	NT	**470**	NS
Chemical Oxygen Demand	mg/l	25	NE	NT	NT	NT	NT	NT	NT	**1100**	NS
Total Dissolved Solids	mg/l	20	NE	NT	NT	NT	NT	NT	NT	NT	NS
Cyanide	mg/l	2	5	NT	NT	NT	NT	NT	NT	NT	NS
Total Antimony (Sb)	mg/l	30	NE	ND	ND	ND	ND	ND	ND	ND	NS
Total Arsenic (As)	mg/l	10	10	ND	ND	ND	ND	ND	ND	**16**	NS
Total Barium (Ba)	mg/l	500	NE	**120**	**95**	**83**	**260**	**18**	**26**	**140**	NS
Total Beryllium (Be)	mg/l	2	6.5	ND	ND	ND	ND	ND	ND	ND	NS
Total Cadmium (Cd)	mg/l	1	0.4	ND	ND	ND	ND	ND	ND	ND	NS
Total Chromium (Cr)	mg/l	10	50	ND	ND	ND	ND	ND	ND	**28**	NS
Total Cobalt (Co)	mg/l	10	NE	ND	ND	ND	**26**	ND	ND	**17**	NS
Total Copper (Cu)	mg/l	200	7	ND	ND	**3.1**	ND	ND	ND	ND	NS
Total Lead (Pb)	mg/l	10	25	ND	ND	ND	ND	ND	ND	ND	NS
Total Nickel (Ni)	mg/l	50	88	ND	ND	ND	**12**	ND	ND	**45**	NS
Total Selenium (Se)	mg/l	20	5	ND	ND	ND	**6**	ND	ND	**8**	NS
Total Silver (Ag)	mg/l	10	0.06	ND	ND	ND	ND	ND	ND	ND	NS
Total Thallium (Tl)	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	NS
Total Vanadium (V)	mg/l	40	NE	ND	ND	ND	ND	ND	ND	**12**	NS
Total Zinc (Zn)	mg/l	50	50	ND	**48**	**31**	**310**	**15**	ND	**62**	NS
Mercury	mg/l	0.2	0.012	NT	NT	NT	ND	NT	NT	ND	NS
Acetone	mg/l	100	NE	ND	ND	ND	ND	ND	ND	**490**	NS
Acrylonitrile	mg/l	200	NE	ND	ND	ND	ND	ND	ND	ND	NS
Benzene	mg/l	5	51	ND	ND	ND	ND	ND	ND	ND	NS
Bromochloromethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
Bromodichloromethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
Bromoform	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
Carbon Disulfide	mg/l	100	NE	ND	ND	ND	ND	ND	ND	**14**	NS
Bromomethane (Methylbromide)	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	NS
Carbon tetrachloride	mg/l	10	1.6	ND	ND	ND	ND	ND	ND	ND	NS
Chlorobenzene (mono)	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
Chloroethane	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	NS
Chloroform	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
Chloromethane (Methylchloride)	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	NS
Dibromochloromethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
1,2-Dibromo-3-chloropropane; DBCP	mg/l	25	NE	ND	ND	ND	ND	ND	ND	ND	NS
1,2-Dibromoethane; Ethylene dibromide	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
Dibromomethane	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	NS
1,2-Dichlorobenzene	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
1,4-Dichlorobenzene	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
trans-1,4-Dichloro-2butene	mg/l	100	NE	ND	ND	ND	ND	ND	ND	ND	NS
1,1-Dichloroethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
1,2-Dichloroethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
1,1-Dichloroethene (-ethylene)	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
cis-1,2-Dichloroethene (-ethylene)	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
trans-1,2-Dichloroethene (-ylene)	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
1,2-Dichloropropane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
cis-1,3-Dichloropropene (-propylene)	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	NS
trans-1,3-Dichloropropene (-propylene)	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	NS
Ethylbenzene	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
2-Hexanone	mg/l	50	NE	ND	ND	ND	ND	ND	ND	ND	NS
Iodomethane	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	NS
Dichloromethane (Methylene chloride)	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	NS
2-Butanone (Methyl ethyl ketone)	mg/l	100	NE	ND	ND	ND	ND	ND	ND	**300**	NS
4-Methyl-2-Pentanone	mg/l	100	NE	ND	ND	ND	ND	ND	ND	ND	NS
Styrene	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	NS
1,1,1,2-Tetrachloroethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
1,1,2,2-Tetrachloroethane	mg/l	5	4	ND	ND	ND	ND	ND	ND	ND	NS
Tetrachloroethene (-ethylene)	mg/l	5	3.3	ND	ND	ND	ND	ND	ND	ND	NS
Toluene	mg/l	5	0.36	ND	ND	ND	ND	ND	ND	ND	NS
1,1,1-Trichloroethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
1,1,2-Trichloroethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
Trichloroethene (-ethylene)	mg/l	5	30	ND	ND	ND	ND	ND	ND	ND	NS
Trichlorofluoromethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
1,2,3-Trichloropropane	mg/l	15	NE	ND	ND	ND	ND	ND	ND	ND	NS
Vinyl acetate	mg/l	50	NE	ND	ND	ND	ND	ND	ND	ND	NS
Vinyl chloride	mg/l	10	2.4	ND	ND	ND	ND	ND	ND	ND	NS
Xylene	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS

Notes:
MCL = Maximum Contaminant Level, as established in the NCDENR, "Redbook" Surface Waters and Wetlands Standards
Section 15A NCAC 02B.0100, .0200, and .0300.
ND = Not Detected at the method detection limit
NS = Not Sampled
NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
NP = Not Present during sampling event
Shaded cells indicate exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Surface Water Sampling Event (10-21-2004)

TEST	UNITS	MDL	MCL	SW-1	SW-2	SW-3	SW-5	SW-6	SW-7	Leachate	Settling
pH	pH units (on-site)	-	<6.0; >9.0	**7.06**	**6.62**	NS	**7.16**	**7.42**	**6.41**	**7.89**	NS
Specific Conductance	mmhos/cm (on-site)	1	NE	**103**	**103**	NS	**129**	**26**	**38**	**3270**	NS
Temperature	°C (on-site)	-	29	**14**	**14.5**	NS	**15**	**15**	**16**	**23.4**	NS
Turbidity	NTU (on-site)	0.1	50	NT	NT	NS	NT	NT	NT	NT	NS
Nitrate as N	mg/l	0.1	NE	NT	NT	NS	NT	NT	NT	ND	NS
Nitrate/Nitrite as N	mg/l	0.1	NE	NT	NT	NS	NT	NT	NT	ND	NS
Nitrite as N	mg/l	0.1	NE	NT	NT	NS	NT	NT	NT	NT	NS
Nitrogen	mg/l	0.2	NE	NT	NT	NS	NT	NT	NT	NT	NS
Total Nitrogen, Kjeldahl	mg/l	100	NE	NT	NT	NS	NT	NT	NT	NT	NS
Sulfate	mg/l	500	NE	NT	NT	NS	NT	NT	NT	**34**	NS
Biochemical Oxygen Demand	mg/l	2	NE	NT	NT	NS	NT	NT	NT	**640**	NS
Chemical Oxygen Demand	mg/l	25	NE	NT	NT	NS	NT	NT	NT	**1300**	NS
Total Dissolved Solids	mg/l	20	NE	NT	NT	NS	NT	NT	NT	NT	NS
Cyanide	mg/l	2	5	NT	NT	NS	NT	NT	NT	NT	NS
Total Antimony (Sb)	mg/l	30	NE	ND	ND	NS	ND	ND	ND	ND	NS
Total Arsenic (As)	mg/l	10	10	ND	ND	NS	ND	ND	ND	**10**	NS
Total Barium (Ba)	mg/l	500	NE	**100**	**100**	NS	**87**	**24**	**31**	**160**	NS
Total Beryllium (Be)	mg/l	2	6.5	ND	ND	NS	ND	**2.6**	ND	ND	NS
Total Cadmium (Cd)	mg/l	1	0.4	ND	ND	NS	ND	**2.1**	ND	ND	NS
Total Chromium (Cr)	mg/l	10	50	ND	ND	NS	ND	**3.7**	**2.3**	**26**	NS
Total Cobalt (Co)	mg/l	10	NE	ND	ND	NS	**6.5**	ND	ND	ND	NS
Total Copper (Cu)	mg/l	200	7	ND	ND	NS	ND	ND	ND	ND	NS
Total Lead (Pb)	mg/l	10	25	ND	ND	NS	ND	ND	ND	ND	NS
Total Nickel (Ni)	mg/l	50	88	ND	ND	NS	ND	ND	ND	**24**	NS
Total Selenium (Se)	mg/l	20	5	ND	ND	NS	ND	ND	ND	**6.2**	NS
Total Silver (Ag)	mg/l	10	0.06	ND	ND	NS	ND	ND	ND	ND	NS
Total Thallium (Tl)	mg/l	10	NE	ND	ND	NS	ND	ND	ND	ND	NS
Total Vanadium (V)	mg/l	40	NE	ND	ND	NS	ND	ND	ND	**8.2**	NS
Total Zinc (Zn)	mg/l	50	50	ND	**44**	NS	**17**	**12**	**13**	**43**	NS
Mercury	mg/l	0.2	0.012	NT	NT	NS	NT	NT	NT	NT	NS
Acetone	mg/l	100	NE	ND	ND	NS	ND	ND	ND	**290**	NS
Acrylonitrile	mg/l	200	NE	ND	ND	NS	ND	ND	ND	ND	NS
Benzene	mg/l	5	51	ND	ND	NS	ND	ND	ND	ND	NS
Bromochloromethane	mg/l	5	NE	ND	ND	NS	ND	ND	ND	ND	NS
Bromodichloromethane	mg/l	5	NE	ND	ND	NS	ND	ND	ND	ND	NS
Bromoform	mg/l	5	NE	ND	ND	NS	ND	ND	ND	ND	NS
Carbon Disulfide	mg/l	100	NE	ND	ND	NS	ND	**39**	**32**	ND	NS
Bromomethane (Methylbromide)	mg/l	10	NE	ND	ND	NS	ND	ND	ND	ND	NS
Carbon tetrachloride	mg/l	10	1.6	ND	ND	NS	ND	ND	ND	ND	NS
Chlorobenzene (mono)	mg/l	5	NE	ND	ND	NS	ND	ND	ND	ND	NS
Chloroethane	mg/l	10	NE	ND	ND	NS	ND	ND	ND	ND	NS
Chloroform	mg/l	5	NE	ND	ND	NS	ND	ND	ND	ND	NS
Chloromethane (Methylchloride)	mg/l	10	NE	ND	ND	NS	ND	ND	ND	ND	NS
Dibromochloromethane	mg/l	5	NE	ND	ND	NS	ND	ND	ND	ND	NS
1,2-Dibromo-3-chloropropane; DBCP	mg/l	25	NE	ND	ND	NS	ND	ND	ND	ND	NS
1,2-Dibromoethane; Ethylene dibromide	mg/l	5	NE	ND	ND	NS	ND	ND	ND	ND	NS
Dibromomethane	mg/l	10	NE	ND	ND	NS	ND	ND	ND	ND	NS
1,2-Dichlorobenzene	mg/l	5	NE	ND	ND	NS	ND	ND	ND	ND	NS
1,4-Dichlorobenzene	mg/l	5	NE	ND	ND	NS	ND	ND	ND	ND	NS
trans-1,4-Dichloro-2butene	mg/l	100	NE	ND	ND	NS	ND	ND	ND	ND	NS
1,1-Dichloroethane	mg/l	5	NE	ND	ND	NS	ND	ND	ND	ND	NS
1,2-Dichloroethane	mg/l	5	NE	ND	ND	NS	ND	ND	ND	ND	NS
1,1-Dichloroethene (-ethylene)	mg/l	5	NE	ND	ND	NS	ND	ND	ND	ND	NS
cis-1,2-Dichloroethene (-ethylene)	mg/l	5	NE	ND	ND	NS	ND	ND	ND	ND	NS
trans-1,2-Dichloroethene (-ylene)	mg/l	5	NE	ND	ND	NS	ND	ND	ND	ND	NS
1,2-Dichloropropane	mg/l	5	NE	ND	ND	NS	ND	ND	ND	ND	NS
cis-1,3-Dichloropropene (-propylene)	mg/l	10	NE	ND	ND	NS	ND	ND	ND	ND	NS
trans-1,3-Dichloropropene (-propylene)	mg/l	10	NE	ND	ND	NS	ND	ND	ND	ND	NS
Ethylbenzene	mg/l	5	NE	ND	ND	NS	ND	ND	ND	ND	NS
2-Hexanone	mg/l	50	NE	ND	ND	NS	ND	ND	ND	ND	NS
Iodomethane	mg/l	10	NE	ND	ND	NS	ND	ND	ND	ND	NS
Dichloromethane (Methylene chloride)	mg/l	10	NE	ND	ND	NS	ND	ND	ND	ND	NS
2-Butanone (Methyl ethyl ketone)	mg/l	100	NE	ND	ND	NS	ND	ND	ND	**260**	NS
4-Methyl-2-Pentanone	mg/l	100	NE	ND	ND	NS	ND	ND	ND	ND	NS
Styrene	mg/l	10	NE	ND	ND	NS	ND	ND	ND	ND	NS
1,1,1,2-Tetrachloroethane	mg/l	5	NE	ND	ND	NS	ND	ND	ND	ND	NS
1,1,2,2-Tetrachloroethane	mg/l	5	4	ND	ND	NS	ND	ND	ND	ND	NS
Tetrachloroethene (-ethylene)	mg/l	5	3.3	ND	ND	NS	ND	ND	ND	ND	NS
Toluene	mg/l	5	0.36	ND	ND	NS	ND	ND	ND	ND	NS
1,1,1-Trichloroethane	mg/l	5	NE	ND	ND	NS	ND	ND	ND	ND	NS
1,1,2-Trichloroethane	mg/l	5	NE	ND	ND	NS	ND	ND	ND	ND	NS
Trichloroethene (-ethylene)	mg/l	5	30	ND	ND	NS	ND	ND	ND	ND	NS
Trichlorofluoromethane	mg/l	5	NE	ND	ND	NS	ND	ND	ND	ND	NS
1,2,3-Trichloropropane	mg/l	15	NE	ND	ND	NS	ND	ND	ND	ND	NS
Vinyl acetate	mg/l	50	NE	ND	ND	NS	ND	ND	ND	ND	NS
Vinyl chloride	mg/l	10	2.4	ND	ND	NS	ND	ND	ND	ND	NS
Xylene	mg/l	5	NE	ND	ND	NS	ND	ND	ND	ND	NS

Notes:
MCL = Maximum Contaminant Level, as established in the NCDENR, "Redbook" Surface Waters and Wetlands Standards
Section 15A NCAC 02B.0100, .0200, and .0300.
ND = Not Detected at the method detection limit
NS = Not Sampled
NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
NP = Not Present during sampling event
Shaded cells indicate exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Surface Water Sampling Event (4-18-2005)

TEST	UNITS	MDL	MCL	SW-1	SW-2	SW-3	SW-5	SW-6	SW-7	Leachate	Settling
pH	pH units (on-site)	-	<6.0; >9.0	**6.49**	**5.99**	**6.21**	**7.05**	**7.08**	**7.27**	**7.28**	**6.26**
Specific Conductance	mmhos/cm (on-site)	1	NE	**79**	**88**	**151**	**120**	**21**	**28**	**6500**	**172**
Temperature	°C (on-site)	-	29	**13**	**123**	**13.5**	**16**	**14.1**	**13**	**19**	**21**
Turbidity	NTU (on-site)	0.1	50	NT	NT	NT	NT	NT	NT	NT	NT
Nitrate as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	ND	NT
Nitrate/Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	ND	NT
Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	NT	NT
Nitrogen	mg/l	0.2	NE	NT	NT	NT	NT	NT	NT	NT	NT
Total Nitrogen, Kjeldahl	mg/l	100	NE	NT	NT	NT	NT	NT	NT	NT	NT
Sulfate	mg/l	500	NE	NT	NT	NT	NT	NT	NT	**1300**	NT
Biochemical Oxygen Demand	mg/l	2	NE	NT	NT	NT	NT	NT	NT	**300**	NT
Chemical Oxygen Demand	mg/l	25	NE	NT	NT	NT	NT	NT	NT	**760**	NT
Total Dissolved Solids	mg/l	20	NE	NT	NT	NT	NT	NT	NT	NT	NT
Cyanide	mg/l	2	5	NT	NT	NT	NT	NT	NT	NT	NT
Total Antimony (Sb)	mg/l	30	NE	ND	ND	ND	ND	ND	ND	ND	ND
Total Arsenic (As)	mg/l	10	10	ND	ND	ND	ND	ND	ND	**22**	ND
Total Barium (Ba)	mg/l	500	NE	**100**	**120**	**98**	**79**	**24**	**28**	**390**	**83**
Total Beryllium (Be)	mg/l	2	6.5	ND	ND	ND	ND	ND	ND	ND	ND
Total Cadmium (Cd)	mg/l	1	0.4	ND	ND	ND	ND	ND	ND	ND	ND
Total Chromium (Cr)	mg/l	10	50	ND	ND	ND	ND	ND	ND	**31**	ND
Total Cobalt (Co)	mg/l	10	NE	ND	ND	ND	ND	ND	ND	**14**	ND
Total Copper (Cu)	mg/l	200	7	ND	ND	ND	ND	ND	ND	ND	ND
Total Lead (Pb)	mg/l	10	25	ND	ND	ND	ND	ND	ND	ND	ND
Total Nickel (Ni)	mg/l	50	88	ND	ND	ND	ND	ND	ND	**50**	ND
Total Selenium (Se)	mg/l	20	5	ND	ND	ND	ND	ND	ND	**7.4**	ND
Total Silver (Ag)	mg/l	10	0.06	ND	ND	ND	ND	ND	ND	ND	ND
Total Thallium (Tl)	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND
Total Vanadium (V)	mg/l	40	NE	ND	ND	ND	ND	ND	ND	**17**	ND
Total Zinc (Zn)	mg/l	50	50	ND	**50**	**22**	**34**	ND	ND	**150**	ND
Mercury	mg/l	0.2	0.012	NT	NT	NT	NT	NT	NT	NT	NT
Acetone	mg/l	100	NE	ND	ND	ND	ND	ND	ND	**240**	ND
Acrylonitrile	mg/l	200	NE	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	mg/l	5	51	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	mg/l	100	NE	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane (Methylbromide)	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	mg/l	10	1.6	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene (mono)	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methylchloride)	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane; DBCP	mg/l	25	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane; Ethylene dibromide	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-Dichloro-2butene	mg/l	100	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene (-ethylene)	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene (-ethylene)	mg/l	5	NE	ND	ND	ND	ND	ND	ND	**11**	ND
trans-1,2-Dichloroethene (-ylene)	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene (-propylene)	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene (-propylene)	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	mg/l	5	NE	ND	ND	ND	ND	ND	ND	**11**	ND
2-Hexanone	mg/l	50	NE	ND	ND	ND	ND	ND	ND	ND	ND
Iodomethane	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND
Dichloromethane (Methylene chloride)	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone (Methyl ethyl ketone)	mg/l	100	NE	ND	ND	ND	ND	ND	ND	**410**	ND
4-Methyl-2-Pentanone	mg/l	100	NE	ND	ND	ND	ND	ND	ND	**40**	ND
Styrene	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	mg/l	5	4	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene (-ethylene)	mg/l	5	3.3	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	mg/l	5	0.36	ND	ND	ND	ND	ND	ND	**63**	ND
1,1,1-Trichloroethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene (-ethylene)	mg/l	5	30	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	mg/l	15	NE	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl acetate	mg/l	50	NE	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	mg/l	10	2.4	ND	ND	ND	ND	ND	ND	ND	ND
Xylene	mg/l	5	NE	ND	ND	ND	ND	ND	ND	**43**	ND

Notes:
MCL = Maximum Contaminant Level, as established in the NCDENR, "Redbook" Surface Waters and Wetlands Standards
Section 15A NCAC 02B.0100, .0200, and .0300.
ND = Not Detected at the method detection limit
NS = Not Sampled
NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
NP = Not Present during sampling event
Shaded cells indicate exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Surface Water Sampling Event (10-13-2005)

TEST	UNITS	MDL	MCL	SW-1	SW-2	SW-3	SW-5	SW-6	SW-7	Leachate	Settling
pH	pH units (on-site)	-	<6.0; >9.0	**7.11**	**6.72**	**7.18**	**6.28**	**6.76**	**8.13**	**8.01**	NS
Specific Conductance	mmhos/cm (on-site)	1	NE	**89**	**90**	**240**	**340**	**91**	**31**	**6500**	NS
Temperature	°C (on-site)	-	29	**15.7**	**16.9**	**16.9**	**18.9**	**18.7**	**15.2**	**21.1**	NS
Turbidity	NTU (on-site)	0.1	50	NT	NT	NT	NT	NT	NT	NT	NS
Nitrate as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	ND	NS
Nitrate/Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	ND	NS
Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	ND	NS
Nitrogen	mg/l	0.2	NE	NT	NT	NT	NT	NT	NT	NT	NS
Total Nitrogen, Kjeldahl	mg/l	100	NE	NT	NT	NT	NT	NT	NT	NT	NS
Sulfate	mg/l	500	NE	NT	NT	NT	NT	NT	NT	**1300**	NS
Biochemical Oxygen Demand	mg/l	2	NE	NT	NT	NT	NT	NT	NT	**720**	NS
Chemical Oxygen Demand	mg/l	25	NE	NT	NT	NT	NT	NT	NT	**920**	NS
Total Dissolved Solids	mg/l	20	NE	NT	NT	NT	NT	NT	NT	NT	NS
Cyanide	mg/l	2	5	NT	NT	NT	NT	NT	NT	NT	NS
Total Antimony (Sb)	mg/l	30	NE	NT	NT	NT	ND	NT	NT	NT	NS
Total Arsenic (As)	mg/l	10	10	ND	ND	ND	ND	ND	ND	**16**	NS
Total Barium (Ba)	mg/l	500	NE	**120**	**96**	**140**	**90**	**86**	**36**	**430**	NS
Total Beryllium (Be)	mg/l	2	6.5	NT	NT	NT	ND	NT	NT	NT	NS
Total Cadmium (Cd)	mg/l	1	0.4	ND	ND	ND	ND	ND	ND	ND	NS
Total Chromium (Cr)	mg/l	10	50	ND	ND	ND	**4.2**	ND	ND	**50**	NS
Total Cobalt (Co)	mg/l	10	NE	NT	NT	NT	**6.8**	NT	NT	NT	NS
Total Copper (Cu)	mg/l	200	7	NT	NT	NT	**2.4**	NT	NT	NT	NS
Total Lead (Pb)	mg/l	10	25	ND	ND	ND	ND	ND	ND	ND	NS
Total Nickel (Ni)	mg/l	50	88	NT	NT	NT	ND	NT	NT	NT	NS
Total Selenium (Se)	mg/l	20	5	ND	ND	ND	ND	ND	ND	**9.2**	NS
Total Silver (Ag)	mg/l	10	0.06	ND	ND	ND	ND	ND	ND	ND	NS
Total Thallium (Tl)	mg/l	10	NE	NT	NT	NT	ND	NT	NT	NT	NS
Total Vanadium (V)	mg/l	40	NE	NT	NT	NT	ND	NT	NT	NT	NS
Total Zinc (Zn)	mg/l	50	50	NT	NT	NT	**33**	NT	NT	NT	NS
Mercury	mg/l	0.2	0.012	NT	NT	NT	NT	NT	NT	ND	NS
Acetone	mg/l	100	NE	ND	ND	ND	ND	ND	ND	ND	NS
Acrylonitrile	mg/l	200	NE	ND	ND	ND	ND	ND	ND	ND	NS
Benzene	mg/l	5	51	ND	ND	ND	ND	ND	ND	ND	NS
Bromochloromethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
Bromodichloromethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
Bromoform	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
Carbon Disulfide	mg/l	100	NE	ND	ND	ND	ND	ND	ND	ND	NS
Bromomethane (Methylbromide)	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	NS
Carbon tetrachloride	mg/l	10	1.6	ND	ND	ND	ND	ND	ND	ND	NS
Chlorobenzene (mono)	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
Chloroethane	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	NS
Chloroform	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
Chloromethane (Methylchloride)	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	NS
Dibromochloromethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
1,2-Dibromo-3-chloropropane; DBCP	mg/l	25	NE	ND	ND	ND	ND	ND	ND	ND	NS
1,2-Dibromoethane; Ethylene dibromide	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
Dibromomethane	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	NS
1,2-Dichlorobenzene	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
1,4-Dichlorobenzene	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
trans-1,4-Dichloro-2butene	mg/l	100	NE	ND	ND	ND	ND	ND	ND	ND	NS
1,1-Dichloroethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
1,2-Dichloroethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
1,1-Dichloroethene (-ethylene)	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
cis-1,2-Dichloroethene (-ethylene)	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
trans-1,2-Dichloroethene (-ylene)	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
1,2-Dichloropropane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
cis-1,3-Dichloropropene (-propylene)	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	NS
trans-1,3-Dichloropropene (-propylene)	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	NS
Ethylbenzene	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
2-Hexanone	mg/l	50	NE	ND	ND	ND	ND	ND	ND	ND	NS
Iodomethane	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	NS
Dichloromethane (Methylene chloride)	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	NS
2-Butanone (Methyl ethyl ketone)	mg/l	100	NE	ND	ND	ND	ND	ND	ND	ND	NS
4-Methyl-2-Pentanone	mg/l	100	NE	ND	ND	ND	ND	ND	ND	ND	NS
Styrene	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	NS
1,1,1,2-Tetrachloroethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
1,1,2,2-Tetrachloroethane	mg/l	5	4	ND	ND	ND	ND	ND	ND	ND	NS
Tetrachloroethene (-ethylene)	mg/l	5	3.3	ND	ND	ND	ND	ND	ND	ND	NS
Toluene	mg/l	5	0.36	ND	ND	ND	ND	ND	ND	ND	NS
1,1,1-Trichloroethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
1,1,2-Trichloroethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
Trichloroethene (-ethylene)	mg/l	5	30	ND	ND	ND	ND	ND	ND	ND	NS
Trichlorofluoromethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
1,2,3-Trichloropropane	mg/l	15	NE	ND	ND	ND	ND	ND	ND	ND	NS
Vinyl acetate	mg/l	50	NE	ND	ND	ND	ND	ND	ND	ND	NS
Vinyl chloride	mg/l	10	2.4	ND	ND	ND	ND	ND	ND	ND	NS
Xylene	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS

Notes:
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ND = Not Detected at the method detection limit
NS = Not Sampled
NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
NP = Not Present during sampling event
Shaded cells indicate exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Surface Water Sampling Event (4-25-2006)

TEST	UNITS	MDL	MCL	SW-1	SW-2	SW-3	SW-5	SW-6	SW-7	Leachate	Settling
pH	pH units (on-site)	-	<6.0; >9.0	**7.07**	**7.11**	**7.18**	**6.73**	**6.45**	**6.28**	**7.55**	**6.81**
Specific Conductance	mmhos/cm (on-site)	1	NE	**107**	**138**	**340**	**201**	**45**	**53**	**8660**	**216**
Temperature	°C (on-site)	-	29	**14.1**	**13.8**	**15.6**	**18.6**	**14.8**	**14.3**	**17.1**	**20.4**
Turbidity	NTU (on-site)	0.1	50	NT	NT	NT	NT	NT	NT	NT	NT
Nitrate as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	**2.4**	NT
Nitrate/Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	**2.4**	NT
Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	NT	NT
Nitrogen	mg/l	0.2	NE	NT	NT	NT	NT	NT	NT	NT	NT
Total Nitrogen, Kjeldahl	mg/l	100	NE	NT	NT	NT	NT	NT	NT	NT	NT
Sulfate	mg/l	500	NE	NT	NT	NT	NT	NT	NT	**2400**	NT
Biochemical Oxygen Demand	mg/l	2	NE	NT	NT	NT	NT	NT	NT	**51**	NT
Chemical Oxygen Demand	mg/l	25	NE	NT	NT	NT	NT	NT	NT	**700**	NT
Total Dissolved Solids	mg/l	20	NE	NT	NT	NT	NT	NT	NT	NT	NT
Cyanide	mg/l	2	5	NT	NT	NT	NT	NT	NT	NT	NT
Total Antimony (Sb)	mg/l	30	NE	ND	ND	ND	ND	ND	ND	ND	ND
Total Arsenic (As)	mg/l	10	10	ND	ND	ND	ND	ND	ND	**18**	ND
Total Barium (Ba)	mg/l	500	NE	ND	ND	ND	ND	ND	ND	**580**	ND
Total Beryllium (Be)	mg/l	2	6.5	ND	ND	ND	ND	ND	ND	ND	ND
Total Cadmium (Cd)	mg/l	1	0.4	ND	ND	ND	ND	ND	ND	ND	ND
Total Chromium (Cr)	mg/l	10	50	ND	ND	ND	ND	ND	ND	**40**	ND
Total Cobalt (Co)	mg/l	10	NE	ND	ND	ND	ND	ND	ND	**15**	ND
Total Copper (Cu)	mg/l	200	7	ND	ND	ND	ND	ND	ND	ND	ND
Total Lead (Pb)	mg/l	10	25	ND	ND	ND	**11**	ND	ND	ND	ND
Total Nickel (Ni)	mg/l	50	88	ND	ND	ND	ND	ND	ND	**56**	ND
Total Selenium (Se)	mg/l	20	5	ND	ND	ND	ND	ND	ND	ND	ND
Total Silver (Ag)	mg/l	10	0.06	ND	ND	ND	ND	ND	ND	ND	ND
Total Thallium (Tl)	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND
Total Vanadium (V)	mg/l	40	NE	ND	ND	ND	ND	ND	ND	ND	ND
Total Zinc (Zn)	mg/l	50	50	ND	ND	ND	ND	ND	ND	**130**	ND
Mercury	mg/l	0.2	0.012	NT	NT	NT	NT	NT	NT	NT	NT
Acetone	mg/l	100	NE	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	mg/l	200	NE	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	mg/l	5	51	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	mg/l	100	NE	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane (Methylbromide)	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	mg/l	10	1.6	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene (mono)	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methylchloride)	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane; DBCP	mg/l	25	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane; Ethylene dibromide	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-Dichloro-2butene	mg/l	100	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene (-ethylene)	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene (-ethylene)	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene (-ylene)	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene (-propylene)	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene (-propylene)	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	mg/l	5	NE	ND	ND	ND	ND	ND	ND	**6.2**	ND
2-Hexanone	mg/l	50	NE	ND	ND	ND	ND	ND	ND	ND	ND
Iodomethane	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND
Dichloromethane (Methylene chloride)	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone (Methyl ethyl ketone)	mg/l	100	NE	ND	ND	ND	ND	ND	ND	**24**	ND
4-Methyl-2-Pentanone	mg/l	100	NE	ND	ND	ND	ND	ND	ND	**15**	ND
Styrene	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	mg/l	5	4	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene (-ethylene)	mg/l	5	3.3	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	mg/l	5	0.36	ND	ND	ND	ND	ND	ND	**12**	ND
1,1,1-Trichloroethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene (-ethylene)	mg/l	5	30	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	mg/l	15	NE	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl acetate	mg/l	50	NE	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	mg/l	10	2.4	ND	ND	ND	ND	ND	ND	ND	ND
Xylene	mg/l	5	NE	ND	ND	ND	ND	ND	ND	**16.1**	ND

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NS = Not Sampled
NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
NP = Not Present during sampling event
Shaded cells indicate exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Surface Water Sampling Event (10-16-2006)

TEST	UNITS	MDL	MCL	SW-1	SW-2	SW-3	SW-5	SW-6	SW-7	Leachate	Settling
pH	pH units (on-site)	-	<6.0; >9.0	**7.53**	**7.1**	NT	**7.14**	**6.64**	**7.13**	**8.11**	NS
Specific Conductance	mmhos/cm (on-site)	1	NE	**123**	**139**	NT	**200**	**46**	**40**	**9800**	NS
Temperature	°C (on-site)	-	29	**11.9**	**10.9**	NT	**11.9**	**13.4**	**11.3**	**19.6**	NS
Turbidity	NTU (on-site)	0.1	50	NT	NT	NT	NT	NT	NT	NT	NS
Nitrate as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	**0.58**	NS
Nitrate/Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	ND	NS
Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	ND	NS
Nitrogen	mg/l	0.2	NE	NT	NT	NT	NT	NT	NT	NT	NS
Total Nitrogen, Kjeldahl	mg/l	100	NE	NT	NT	NT	NT	NT	NT	NT	NS
Sulfate	mg/l	500	NE	NT	NT	NT	NT	NT	NT	**2100**	NS
Biochemical Oxygen Demand	mg/l	2	NE	NT	NT	NT	NT	NT	NT	**61**	NS
Chemical Oxygen Demand	mg/l	25	NE	NT	NT	NT	NT	NT	NT	**780**	NS
Total Dissolved Solids	mg/l	20	NE	NT	NT	NT	NT	NT	NT	NT	NS
Cyanide	mg/l	2	5	NT	NT	NT	NT	NT	NT	NT	NS
Total Antimony (Sb)	mg/l	30	NE	ND	ND	ND	ND	ND	ND	ND	NS
Total Arsenic (As)	mg/l	10	10	ND	ND	ND	ND	ND	ND	**18**	NS
Total Barium (Ba)	mg/l	500	NE	**120**	**140**	**120**	**240**	**54**	**33**	**430**	NS
Total Beryllium (Be)	mg/l	2	6.5	ND	ND	ND	ND	ND	ND	ND	NS
Total Cadmium (Cd)	mg/l	1	0.4	ND	ND	ND	**5.8**	ND	ND	ND	NS
Total Chromium (Cr)	mg/l	10	50	ND	ND	ND	**21**	ND	ND	**54**	NS
Total Cobalt (Co)	mg/l	10	NE	ND	ND	ND	ND	**7.4**	ND	**14**	NS
Total Copper (Cu)	mg/l	200	7	ND	ND	ND	**23**	ND	ND	ND	NS
Total Lead (Pb)	mg/l	10	25	ND	ND	ND	**18**	ND	ND	ND	NS
Total Nickel (Ni)	mg/l	50	88	ND	ND	ND	**8.4**	ND	ND	**68**	NS
Total Selenium (Se)	mg/l	20	5	ND	ND	ND	ND	ND	ND	ND	NS
Total Silver (Ag)	mg/l	10	0.06	ND	ND	ND	ND	ND	ND	ND	NS
Total Thallium (Tl)	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	NS
Total Vanadium (V)	mg/l	40	NE	ND	ND	ND	**62**	ND	ND	**18**	NS
Total Zinc (Zn)	mg/l	50	50	ND	**39**	**22**	**130**	ND	ND	**63**	NS
Mercury	mg/l	0.2	0.012	NT	NT	NT	NT	NT	NT	NT	NS
Acetone	mg/l	100	NE	ND	ND	ND	ND	ND	ND	ND	NS
Acrylonitrile	mg/l	200	NE	ND	ND	ND	ND	ND	ND	ND	NS
Benzene	mg/l	5	51	ND	ND	ND	ND	ND	ND	ND	NS
Bromochloromethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
Bromodichloromethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
Bromoform	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
Carbon Disulfide	mg/l	100	NE	ND	ND	ND	ND	ND	ND	ND	NS
Bromomethane (Methylbromide)	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	NS
Carbon tetrachloride	mg/l	10	1.6	ND	ND	ND	ND	ND	ND	ND	NS
Chlorobenzene (mono)	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
Chloroethane	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	NS
Chloroform	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
Chloromethane (Methylchloride)	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	NS
Dibromochloromethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
1,2-Dibromo-3-chloropropane; DBCP	mg/l	25	NE	ND	ND	ND	ND	ND	ND	ND	NS
1,2-Dibromoethane; Ethylene dibromide	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
Dibromomethane	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	NS
1,2-Dichlorobenzene	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
1,4-Dichlorobenzene	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
trans-1,4-Dichloro-2butene	mg/l	100	NE	ND	ND	ND	ND	ND	ND	ND	NS
1,1-Dichloroethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
1,2-Dichloroethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
1,1-Dichloroethene (-ethylene)	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
cis-1,2-Dichloroethene (-ethylene)	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
trans-1,2-Dichloroethene (-ylene)	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
1,2-Dichloropropane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
cis-1,3-Dichloropropene (-propylene)	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	NS
trans-1,3-Dichloropropene (-propylene)	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	NS
Ethylbenzene	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
2-Hexanone	mg/l	50	NE	ND	ND	ND	ND	ND	ND	ND	NS
Iodomethane	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	NS
Dichloromethane (Methylene chloride)	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	NS
2-Butanone (Methyl ethyl ketone)	mg/l	100	NE	ND	ND	ND	ND	ND	ND	ND	NS
4-Methyl-2-Pentanone	mg/l	100	NE	ND	ND	ND	ND	ND	ND	ND	NS
Styrene	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	NS
1,1,1,2-Tetrachloroethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
1,1,2,2-Tetrachloroethane	mg/l	5	4	ND	ND	ND	ND	ND	ND	ND	NS
Tetrachloroethene (-ethylene)	mg/l	5	3.3	ND	ND	ND	ND	ND	ND	ND	NS
Toluene	mg/l	5	0.36	ND	ND	ND	ND	ND	ND	ND	NS
1,1,1-Trichloroethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
1,1,2-Trichloroethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
Trichloroethene (-ethylene)	mg/l	5	30	ND	ND	ND	ND	ND	ND	ND	NS
Trichlorofluoromethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
1,2,3-Trichloropropane	mg/l	15	NE	ND	ND	ND	ND	ND	ND	ND	NS
Vinyl acetate	mg/l	50	NE	ND	ND	ND	ND	ND	ND	ND	NS
Vinyl chloride	mg/l	10	2.4	ND	ND	ND	ND	ND	ND	ND	NS
Xylene	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS

Notes:
MCL = Maximum Contaminant Level, as established in the NCDENR, "Redbook" Surface Waters and Wetlands Standards Section 15A NCAC 02B.0100, .0200, and .0300.
ND = Not Detected at the method detection limit
NS = Not Sampled
NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
NP = Not Present during sampling event
Shaded cells indicate exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Surface Water Sampling Event (4-23-2007)

TEST	UNITS	MDL	MCL	SW-1	SW-2	SW-3	SW-5	SW-6	SW-7	Leachate	Settling
pH	pH units (on-site)	-	<6.0; >9.0	NT	NT	NT	NT	NT	NT	NT	NT
Specific Conductance	mmhos/cm (on-site)	1	NE	NT	NT	NT	NT	NT	NT	NT	NT
Temperature	°C (on-site)	-	29	NT	NT	NT	NT	NT	NT	NT	NT
Turbidity	NTU (on-site)	0.1	50	NT	NT	NT	NT	NT	NT	NT	NT
Nitrate as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	**0.38**	NT
Nitrate/Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	NT	NT
Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	ND	NT
Nitrogen	mg/l	0.2	NE	NT	NT	NT	NT	NT	NT	NT	NT
Total Nitrogen, Kjeldahl	mg/l	100	NE	NT	NT	NT	NT	NT	NT	NT	NT
Sulfate	mg/l	500	NE	NT	NT	NT	NT	NT	NT	**2400**	NT
Biochemical Oxygen Demand	mg/l	2	NE	NT	NT	NT	NT	NT	NT	**89**	NT
Chemical Oxygen Demand	mg/l	25	NE	NT	NT	NT	NT	NT	NT	**1000**	NT
Total Dissolved Solids	mg/l	20	NE	NT	NT	NT	NT	NT	NT	NT	NT
Cyanide	mg/l	2	5	NT	NT	NT	NT	NT	NT	NT	NT
Total Antimony (Sb)	mg/l	30	NE	ND	ND	ND	ND	ND	ND	ND	ND
Total Arsenic (As)	mg/l	10	10	ND	ND	ND	ND	ND	ND	**16**	ND
Total Barium (Ba)	mg/l	500	NE	**100**	**120**	**250**	ND	ND	ND	**380**	ND
Total Beryllium (Be)	mg/l	2	6.5	ND	ND	ND	ND	ND	ND	ND	ND
Total Cadmium (Cd)	mg/l	1	0.4	ND	ND	ND	ND	ND	ND	ND	ND
Total Chromium (Cr)	mg/l	10	50	ND	ND	ND	ND	ND	ND	**46**	ND
Total Cobalt (Co)	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND
Total Copper (Cu)	mg/l	200	7	ND	ND	ND	**38**	ND	ND	ND	ND
Total Lead (Pb)	mg/l	10	25	ND	ND	ND	ND	ND	ND	ND	ND
Total Nickel (Ni)	mg/l	50	88	ND	ND	ND	ND	ND	ND	**50**	ND
Total Selenium (Se)	mg/l	20	5	ND	ND	ND	ND	ND	ND	ND	ND
Total Silver (Ag)	mg/l	10	0.06	ND	ND	ND	ND	ND	ND	ND	ND
Total Thallium (Tl)	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND
Total Vanadium (V)	mg/l	40	NE	ND	ND	ND	ND	ND	ND	ND	ND
Total Zinc (Zn)	mg/l	50	50	**13**	**37**	**130**	**91**	**15**	**11**	**80**	**15**
Mercury	mg/l	0.2	0.012	NT	NT	NT	NT	NT	NT	NT	NT
Acetone	mg/l	100	NE	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	mg/l	200	NE	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	mg/l	5	51	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	mg/l	100	NE	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane (Methylbromide)	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	mg/l	10	1.6	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene (mono)	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methylchloride)	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane; DBCP	mg/l	25	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane; Ethylene dibromide	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-Dichloro-2butene	mg/l	100	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene (-ethylene)	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene (-ethylene)	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene (-ylene)	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene (-propylene)	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene (-propylene)	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	mg/l	5	NE	ND	ND	ND	ND	ND	ND	**10**	ND
2-Hexanone	mg/l	50	NE	ND	ND	ND	ND	ND	ND	ND	ND
Iodomethane	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND
Dichloromethane (Methylene chloride)	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone (Methyl ethyl ketone)	mg/l	100	NE	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone	mg/l	100	NE	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	mg/l	5	4	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene (-ethylene)	mg/l	5	3.3	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	mg/l	5	0.36	ND	ND	ND	ND	ND	ND	**46**	ND
1,1,1-Trichloroethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene (-ethylene)	mg/l	5	30	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	mg/l	15	NE	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl acetate	mg/l	50	NE	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	mg/l	10	2.4	ND	ND	ND	ND	ND	ND	ND	ND
Xylene	mg/l	5	NE	ND	ND	ND	ND	ND	ND	**31.3**	ND

Notes:
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ND = Not Detected at the method detection limit
NS = Not Sampled
NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
NP = Not Present during sampling event
Shaded cells indicate exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Surface Water Sampling Event (10-31-07)

TEST	UNITS	MDL	MCL	SW-1	SW-2	SW-3	SW-5	SW-6	SW-7	Leachate	Settling
pH	pH units (on-site)	-	<6.0; >9.0	**7.04**	**7.11**	**6.8**	**7.5**	**6.35**	**6.74**	**8.03**	NS
Specific Conductance	mmhos/cm (on-site)	1	NE	**156**	**150**	**266**	**320**	**61**	**40**	**1282**	NS
Temperature	°C (on-site)	-	29	**16.5**	**13.4**	**12.7**	**17.2**	**11.5**	**9**	**14.3**	NS
Turbidity	NTU (on-site)	0.1	50	NT	NT	NT	NT	NT	NT	NT	NS
Nitrate as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	NT	NS
Nitrate/Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	NT	NS
Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	NT	NS
Nitrogen	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	**0.53**	NS
Total Nitrogen, Kjeldahl	mg/l	100	NE	NT	NT	NT	NT	NT	NT	NT	NS
Sulfate	mg/l	500	NE	NT	NT	NT	NT	NT	NT	**3010**	NS
Biochemical Oxygen Demand	mg/l	2	NE	NT	NT	NT	NT	NT	NT	**221**	NS
Chemical Oxygen Demand	mg/l	100	NE	NT	NT	NT	NT	NT	NT	**968**	NS
Total Dissolved Solids	mg/l	20	NE	NT	NT	NT	NT	NT	NT	NT	NS
Cyanide	mg/l	2	5	NT	NT	NT	NT	NT	NT	NT	NS
Total Antimony (Sb)	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
Total Arsenic (As)	mg/l	5	10	ND	ND	ND	ND	ND	ND	**24.6**	NS
Total Barium (Ba)	mg/l	5	NE	**583**	**154**	**162**	**85**	**111**	**30.3**	**436**	NS
Total Beryllium (Be)	mg/l	1	6.5	ND	ND	ND	ND	ND	ND	ND	NS
Total Cadmium (Cd)	mg/l	1	0.4	ND	ND	ND	ND	ND	ND	ND	NS
Total Chromium (Cr)	mg/l	5	50	**25.7**	ND	ND	ND	ND	ND	**74.1**	NS
Total Cobalt (Co)	mg/l	5	NE	**10.5**	ND	ND	ND	ND	ND	**12**	NS
Total Copper (Cu)	mg/l	5	7	**18.4**	ND	ND	ND	**8.3**	ND	ND	NS
Total Lead (Pb)	mg/l	5	25	ND	ND	ND	ND	ND	ND	ND	NS
Total Nickel (Ni)	mg/l	5	88	**18.1**	ND	ND	ND	ND	ND	**81.2**	NS
Total Selenium (Se)	mg/l	10	5	ND	ND	ND	ND	ND	ND	ND	NS
Total Silver (Ag)	mg/l	5	0.06	ND	ND	ND	ND	ND	ND	ND	NS
Total Thallium (Tl)	mg/l	5.5	NE	**6.3**	ND	ND	ND	ND	ND	ND	NS
Total Vanadium (V)	mg/l	5	NE	**56.2**	ND	ND	**6.8**	**11.4**	ND	**23.9**	NS
Total Zinc (Zn)	mg/l	10	50	**135**	**71.9**	**60**	**41.3**	**20.4**	ND	**76.7**	NS
Mercury	mg/l	0.2	0.012	NT	NT	NT	NT	NT	NT	NT	NS
Acetone	mg/l	25	NE	ND	ND	ND	ND	ND	ND	ND	NS
Acrylonitrile	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	NS
Benzene	mg/l	1	51	ND	ND	ND	ND	ND	ND	ND	NS
Bromochloromethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	NS
Bromodichloromethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	NS
Bromoform	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	NS
Carbon Disulfide	mg/l	2	NE	ND	ND	ND	ND	ND	ND	ND	NS
Bromomethane (Methylbromide)	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
Carbon tetrachloride	mg/l	1	1.6	ND	ND	ND	ND	ND	ND	ND	NS
Chlorobenzene (mono)	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	NS
Chloroethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	NS
Chloroform	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	NS
Chloromethane (Methylchloride)	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	NS
Dibromochloromethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	NS
1,2-Dibromo-3-chloropropane; DBCP	mg/l	3	NE	ND	ND	ND	ND	ND	ND	ND	NS
1,2-Dibromoethane; Ethylene dibromide	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	NS
Dibromomethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	NS
1,2-Dichlorobenzene	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	NS
1,4-Dichlorobenzene	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	NS
trans-1,4-Dichloro-2butene	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	NS
1,1-Dichloroethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	NS
1,2-Dichloroethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	NS
1,1-Dichloroethene (-ethylene)	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	NS
cis-1,2-Dichloroethene (-ethylene)	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	NS
trans-1,2-Dichloroethene (-ylene)	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	NS
1,2-Dichloropropane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	NS
cis-1,3-Dichloropropene (-propylene)	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	NS
trans-1,3-Dichloropropene (-propylene)	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	NS
Ethylbenzene	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	NS
2-Hexanone	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
Iodomethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
Dichloromethane (Methylene chloride)	mg/l	2	NE	ND	ND	ND	ND	ND	ND	ND	NS
2-Butanone (Methyl ethyl ketone)	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
4-Methyl-2-Pentanone	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
Styrene	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	NS
1,1,1,2-Tetrachloroethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	NS
1,1,2,2-Tetrachloroethane	mg/l	1	4	ND	ND	ND	ND	ND	ND	ND	NS
Tetrachloroethene (-ethylene)	mg/l	1	3.3	ND	ND	ND	ND	ND	ND	ND	NS
Toluene	mg/l	1	0.36	ND	ND	ND	ND	ND	ND	ND	NS
1,1,1-Trichloroethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	NS
1,1,2-Trichloroethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	NS
Trichloroethene (-ethylene)	mg/l	1	30	ND	ND	ND	ND	ND	ND	ND	NS
Trichlorofluoromethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	NS
1,2,3-Trichloropropane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	NS
Vinyl acetate	mg/l	2	NE	ND	ND	ND	ND	ND	ND	ND	NS
Vinyl chloride	mg/l	1	2.4	ND	ND	ND	ND	ND	ND	ND	NS
Xylene	mg/l	2	NE	ND	ND	ND	ND	ND	ND	ND	NS

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ND = Not Detected at the method detection limit
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Shaded cells indicate exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Surface Water Sampling Event (04-23-08)

TEST	UNITS	MDL	MCL	SW-1	SW-2	SW-3	SW-5	SW-6	SW-7	Leachate	Settling
pH	pH units (on-site)	-	<6.0; >9.0	**6.8**	**7.32**	**7.06**	**7.2**	**7.56**	**7**	**8.56**	**7.37**
Specific Conductance	mmhos/cm (on-site)	1	NE	**124**	**162**	**234**	**426**	**48**	**42**	**8140**	**228**
Temperature	°C (on-site)	-	29	**13.1**	**14.5**	**14.3**	**16.9**	**15.2**	**15.6**	**21.4**	**13.1**
Turbidity	NTU (on-site)	0.1	50	NT	NT	NT	NT	NT	NT	NT	NT
Nitrate as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	ND	NT
Nitrate/Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	NT	NT
Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	ND	NT
Nitrogen	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	ND	NT
Total Nitrogen, Kjeldahl	mg/l	100	NE	NT	NT	NT	NT	NT	NT	NT	NT
Sulfate	mg/l	500	NE	NT	NT	NT	NT	NT	NT	**1940**	NT
Biochemical Oxygen Demand	mg/l	2	NE	NT	NT	NT	NT	NT	NT	**741**	NT
Chemical Oxygen Demand	mg/l	100	NE	NT	NT	NT	NT	NT	NT	**1620**	NT
Total Dissolved Solids	mg/l	20	NE	NT	NT	NT	NT	NT	NT	NT	NT
Cyanide	mg/l	2	5	NT	NT	NT	NT	NT	NT	NT	NT
Total Antimony (Sb)	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
Total Arsenic (As)	mg/l	5	10	ND	ND	ND	ND	ND	ND	**9.5**	ND
Total Barium (Ba)	mg/l	5	NE	**111**	**145**	**133**	**184**	**34.4**	**24.9**	**247**	**127**
Total Beryllium (Be)	mg/l	1	6.5	ND	ND	ND	ND	ND	ND	ND	ND
Total Cadmium (Cd)	mg/l	1	0.4	ND	ND	ND	**1.5**	ND	ND	ND	ND
Total Chromium (Cr)	mg/l	5	50	ND	ND	ND	**6.5**	ND	ND	**28.9**	ND
Total Cobalt (Co)	mg/l	5	NE	ND	ND	ND	**11.2**	ND	ND	**9**	**5.5**
Total Copper (Cu)	mg/l	5	7	ND	ND	ND	ND	ND	ND	ND	ND
Total Lead (Pb)	mg/l	5	25	ND	ND	ND	ND	ND	ND	ND	ND
Total Nickel (Ni)	mg/l	5	88	ND	ND	ND	**7.6**	ND	ND	**51.3**	ND
Total Selenium (Se)	mg/l	10	5	ND	ND	ND	ND	ND	ND	ND	ND
Total Silver (Ag)	mg/l	5	0.06	ND	ND	ND	ND	ND	ND	ND	ND
Total Thallium (Tl)	mg/l	5.5	NE	ND	ND	ND	ND	ND	ND	ND	ND
Total Vanadium (V)	mg/l	5	NE	ND	ND	ND	**14.4**	ND	ND	**9.1**	ND
Total Zinc (Zn)	mg/l	10	50	ND	**52.3**	**50.1**	**124**	ND	ND	**52.3**	**21.7**
Mercury	mg/l	0.2	0.012	NT	NT	NT	NT	NT	NT	NT	NT
Acetone	mg/l	25	NE	ND	ND	ND	ND	ND	ND	**34.1**	ND
Acrylonitrile	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	mg/l	1	51	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	mg/l	2	NE	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane (Methylbromide)	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	mg/l	1	1.6	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene (mono)	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methylchloride)	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane; DBCP	mg/l	3	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane; Ethylene dibromide	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-Dichloro-2butene	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene (-ethylene)	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene (-ethylene)	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene (-ylene)	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene (-propylene)	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene (-propylene)	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
Iodomethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
Dichloromethane (Methylene chloride)	mg/l	2	NE	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone (Methyl ethyl ketone)	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	mg/l	1	4	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene (-ethylene)	mg/l	1	3.3	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	mg/l	1	0.36	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene (-ethylene)	mg/l	1	30	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl acetate	mg/l	2	NE	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	mg/l	1	2.4	ND	ND	ND	ND	ND	ND	ND	ND
Xylene	mg/l	2	NE	ND	ND	ND	ND	ND	ND	ND	ND

Notes:
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Section 15A NCAC 02B.0100, .0200, and .0300.
ND = Not Detected at the method detection limit
NS = Not Sampled
NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
NP = Not Present during sampling event
Shaded cells indicate exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Surface Water Sampling Event (10-21-08)

TEST	UNITS	MDL	MCL	SW-1	SW-2	SW-3	SW-5	SW-6	SW-7	Leachate	Settling
pH	pH units (on-site)	-	<6.0; >9.0	**6.51**	**6.75**	**6.84**	**6.54**	**6.08**	**6.45**	**8.63**	Dry
Specific Conductance	mmhos/cm (on-site)	1	NE	**202**	**171**	**296**	**205.6**	**56.1**	**41**	**10780**	Dry
Temperature	°C (on-site)	-	29	**11.3**	**10.2**	**7.9**	**12.5**	**10.8**	**9.6**	**22.2**	Dry
Turbidity	NTU (on-site)	0.1	50	NT	NT	NT	NT	NT	NT	NT	Dry
Nitrate as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	ND	Dry
Nitrate/Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	NT	Dry
Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	**0.14**	Dry
Nitrogen	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	**0.14**	Dry
Total Nitrogen, Kjeldahl	mg/l	100	NE	NT	NT	NT	NT	NT	NT	NT	Dry
Sulfate	mg/l	500	NE	NT	NT	NT	NT	NT	NT	**58.3**	Dry
Biochemical Oxygen Dema	mg/l	2	NE	NT	NT	NT	NT	NT	NT	**198**	Dry
Chemical Oxygen Dema	mg/l	100	NE	NT	NT	NT	NT	NT	NT	**1190**	Dry
Total Dissolved Solids	mg/l	20	NE	NT	NT	NT	NT	NT	NT	NT	Dry
Cyanide	mg/l	2	5	NT	NT	NT	NT	NT	NT	NT	Dry
Total Antimony (Sb)	mg/l	5	NE	ND	ND	ND	**6**	**6.7**	ND	ND	Dry
Total Arsenic (As)	mg/l	5	10	ND	ND	ND	ND	ND	ND	**11.4**	Dry
Total Barium (Ba)	mg/l	5	NE	**285**	**126**	**137**	**289**	**145**	**25.2**	**317**	Dry
Total Beryllium (Be)	mg/l	1	6.5	ND	ND	ND	ND	ND	ND	ND	Dry
Total Cadmium (Cd)	mg/l	1	0.4	ND	ND	ND	ND	ND	ND	ND	Dry
Total Chromium (Cr)	mg/l	5	50	ND	ND	ND	**17.9**	ND	ND	**34.5**	Dry
Total Cobalt (Co)	mg/l	5	NE	**7.9**	**5**	**6.4**	**34.4**	**21.1**	ND	**14.4**	Dry
Total Copper (Cu)	mg/l	5	7	ND	ND	ND	**15.8**	**10.1**	ND	ND	Dry
Total Lead (Pb)	mg/l	5	25	ND	ND	ND	**5.4**	ND	ND	ND	Dry
Total Nickel (Ni)	mg/l	5	88	ND	ND	ND	**12.1**	**6**	ND	**57.6**	Dry
Total Selenium (Se)	mg/l	10	5	ND	ND	ND	**14**	**13.2**	ND	ND	Dry
Total Silver (Ag)	mg/l	5	0.06	ND	ND	ND	ND	ND	ND	ND	Dry
Total Thallium (Tl)	mg/l	5.4	NE	ND	ND	ND	**7.2**	ND	ND	ND	Dry
Total Vanadium (V)	mg/l	5	NE	**9.9**	ND	ND	**43.5**	**17.5**	ND	**12**	Dry
Total Zinc (Zn)	mg/l	10	50	**19**	**75.4**	**39.4**	**116**	**29.5**	**16.7**	**27.6**	Dry
Mercury	mg/l	0.2	0.012	NT	NT	NT	NT	NT	NT	NT	Dry
Acetone	mg/l	25	NE	ND	ND	ND	ND	ND	ND	**37.2**	Dry
Acrylonitrile	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	Dry
Benzene	mg/l	1	51	ND	ND	ND	ND	ND	ND	ND	Dry
Bromochloromethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	Dry
Bromodichloromethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	Dry
Bromoform	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	Dry
Carbon Disulfide	mg/l	2	NE	ND	ND	ND	ND	ND	ND	ND	Dry
Bromomethane (Methylbromide)	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	Dry
Carbon tetrachloride	mg/l	1	1.6	ND	ND	ND	ND	ND	ND	ND	Dry
Chlorobenzene (mono)	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	Dry
Chloroethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	Dry
Chloroform	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	Dry
Chloromethane (Methylchloride)	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	Dry
Dibromochloromethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	Dry
1,2-Dibromo-3-chloropropane; DBCP	mg/l	3	NE	ND	ND	ND	ND	ND	ND	ND	Dry
1,2-Dibromoethane; Ethylene dibromide	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	Dry
Dibromomethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	Dry
1,2-Dichlorobenzene	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	Dry
1,4-Dichlorobenzene	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	Dry
trans-1,4-Dichloro-2butene	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	Dry
1,1-Dichloroethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	Dry
1,2-Dichloroethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	Dry
1,1-Dichloroethene (-ethylene)	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	Dry
cis-1,2-Dichloroethene (-ethylene)	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	Dry
trans-1,2-Dichloroethene (-ylene)	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	Dry
1,2-Dichloropropane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	Dry
cis-1,3-Dichloropropene (-propylene)	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	Dry
trans-1,3-Dichloropropene (-propylene)	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	Dry
Ethylbenzene	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	Dry
2-Hexanone	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	Dry
Iodomethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	Dry
Dichloromethane (Methylene chloride)	mg/l	2	NE	ND	ND	ND	ND	ND	ND	ND	Dry
2-Butanone (Methyl ethyl ketone)	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	Dry
4-Methyl-2-Pentanone	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	Dry
Styrene	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	Dry
1,1,1,2-Tetrachloroethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	Dry
1,1,2,2-Tetrachloroethane	mg/l	1	4	ND	ND	ND	ND	ND	ND	ND	Dry
Tetrachloroethene (-ethylene)	mg/l	1	3.3	ND	ND	ND	ND	ND	ND	ND	Dry
Toluene	mg/l	1	0.36	ND	ND	ND	ND	ND	ND	ND	Dry
1,1,1-Trichloroethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	Dry
1,1,2-Trichloroethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	Dry
Trichloroethene (-ethylene)	mg/l	1	30	ND	ND	ND	ND	ND	ND	ND	Dry
Trichlorofluoromethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	Dry
1,2,3-Trichloropropane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	Dry
Vinyl acetate	mg/l	2	NE	ND	ND	ND	ND	ND	ND	ND	Dry
Vinyl chloride	mg/l	1	2.4	ND	ND	ND	ND	ND	ND	ND	Dry
Xylene	mg/l	2	NE	ND	ND	ND	ND	ND	ND	ND	Dry

Notes:
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= Not Detected at the method detection limit
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NT = Not Tested
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NP = Not Present during sampling event
Shaded cells indicate exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Surface Water Sampling Event (4-22-09)

TEST	UNITS	MDL	MCL	SW-1	SW-2	SW-3	SW-5	SW-6	SW-7	Leachate	Settling
pH	pH units (on-site)	-	<6.0; >9.0	**6.29**	**6.47**	**6.79**	**6.75**	**5.83**	**5.97**	**8.24**	**6.77**
Specific Conductance	mmhos/cm (on-site)	1	NE	**139**	**208**	**319**	**366**	**40**	**52**	**7620**	**394**
Temperature	°C (on-site)	-	29	**11.1**	**10.8**	**9.8**	**12.2**	**11.9**	**12.6**	**19.6**	**17.3**
Turbidity	NTU (on-site)	0.1	50	NT	NT	NT	NT	NT	NT	NT	NT
Nitrate as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	**0.16**	NT
Nitrate/Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	**0.29**	NT
Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	**0.12**	NT
Nitrogen	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	NT	NT
Total Nitrogen, Kjeldahl	mg/l	100	NE	NT	NT	NT	NT	NT	NT	NT	NT
Sulfate	mg/l	500	NE	NT	NT	NT	NT	NT	NT	**1570**	NT
Biochemical Oxygen Demand	mg/l	2	NE	NT	NT	NT	NT	NT	NT	**55.8**	NT
Chemical Oxygen Demand	mg/l	100	NE	NT	NT	NT	NT	NT	NT	**694**	NT
Total Dissolved Solids	mg/l	20	NE	NT	NT	NT	NT	NT	NT	NT	NT
Cyanide	mg/l	2	5	NT	NT	NT	NT	NT	NT	NT	NT
Total Antimony (Sb)	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
Total Arsenic (As)	mg/l	5	10	ND	ND	ND	ND	ND	ND	**11.3**	ND
Total Barium (Ba)	mg/l	5	NE	**108**	**167**	**133**	**70.1**	**35.9**	**41.1**	**181**	**63.8**
Total Beryllium (Be)	mg/l	1	6.5	ND	ND	ND	ND	ND	ND	ND	ND
Total Cadmium (Cd)	mg/l	1	0.4	ND	ND	ND	ND	ND	ND	ND	ND
Total Chromium (Cr)	mg/l	5	50	ND	ND	ND	ND	ND	ND	**16.7**	ND
Total Cobalt (Co)	mg/l	5	NE	ND	ND	ND	**14.9**	**6.5**	**6.6**	**9.8**	**5.3**
Total Copper (Cu)	mg/l	5	7	ND	ND	ND	ND	ND	ND	ND	ND
Total Lead (Pb)	mg/l	5	25	ND	ND	ND	ND	ND	ND	ND	ND
Total Nickel (Ni)	mg/l	5	88	ND	ND	ND	**5.6**	ND	ND	**48.2**	ND
Total Selenium (Se)	mg/l	10	5	ND	ND	ND	ND	ND	ND	ND	ND
Total Silver (Ag)	mg/l	5	0.06	ND	ND	ND	ND	ND	ND	ND	ND
Total Thallium (Tl)	mg/l	5.4	NE	ND	ND	ND	ND	ND	ND	ND	ND
Total Vanadium (V)	mg/l	5	NE	ND	ND	ND	**8.1**	ND	ND	**11.2**	ND
Total Zinc (Zn)	mg/l	10	50	ND	**50**	**36.6**	**80**	ND	ND	**10.9**	ND
Mercury	mg/l	0.2	0.012	NT	NT	NT	NT	NT	NT	NT	NT
Acetone	mg/l	25	NE	ND	ND	ND	ND	ND	ND	**38.4**	ND
Acrylonitrile	mg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	mg/l	1	51	ND	ND	ND	ND	ND	ND	**5.2**	ND
Bromochloromethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	mg/l	2	NE	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane (Methylbromide)	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	mg/l	1	1.6	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene (mono)	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methylchloride)	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane; DBCP	mg/l	3	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane; Ethylene dibromide	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-Dichloro-2-butene	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene (-ethylene)	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene (-ethylene)	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene (-ylene)	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene (-propylene)	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene (-propylene)	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	mg/l	1	NE	ND	ND	ND	ND	ND	ND	**13.7**	ND
2-Hexanone	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
Iodomethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
Dichloromethane (Methylene chloride)	mg/l	2	NE	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone (Methyl ethyl ketone)	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone	mg/l	5	NE	ND	ND	ND	ND	ND	ND	**11.3**	ND
Styrene	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	mg/l	1	4	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene (-ethylene)	mg/l	1	3.3	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	mg/l	1	0.36	ND	ND	ND	ND	ND	ND	**7.3**	ND
1,1,1-Trichloroethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene (-ethylene)	mg/l	1	30	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl acetate	mg/l	2	NE	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	mg/l	1	2.4	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes	mg/l	2	NE	ND	ND	ND	ND	ND	ND	**65.1**	ND
Methyl-tert-butyl-ether (MTBE)	mg/l	1	NE	NT	NT	NT	NT	NT	NT	**9.0**	NT
Naphthalene	mg/l	1	NE	NT	NT	NT	NT	NT	NT	**6.7**	NT
Phosphorus	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	**0.75**	NT

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White Oak Landfill - Haywood Co., NC
Surface Water Sampling Event (10-26-09)

TEST	UNITS	MDL	MCL	SW-1	SW-2	SW-3	SW-5	SW-6	SW-7	Leachate	Settling
pH	pH units (on-site)	-	<6.0; >9.0	**6.41**	Dry	**6.49**	Dry	**6.07**	**6.26**	**7.8**	**6.58**
Specific Conductance	mmhos/cm (on-site)	1	NE	**192**	Dry	**291**	Dry	**60**	**58**	NT	**278**
Temperature	°C (on-site)	-	29	**11.5**	Dry	**11.0**	Dry	**13.6**	**12.4**	NT	**10.3**
Turbidity	NTU (on-site)	0.1	50	NT	Dry	NT	Dry	NT	NT	NT	NT
Nitrate as N	mg/l	0.1	NE	NT	Dry	NT	Dry	NT	NT	NT	NT
Nitrate/Nitrite as N	mg/l	0.1	NE	NT	Dry	NT	Dry	NT	NT	NT	NT
Nitrite as N	mg/l	0.1	NE	NT	Dry	NT	Dry	NT	NT	NT	NT
Nitrogen	mg/l	0.1	NE	NT	Dry	NT	Dry	NT	NT	NT	NT
Total Nitrogen, Kjeldahl	mg/l	100	NE	NT	Dry	NT	Dry	NT	NT	NT	NT
Sulfate	mg/l	500	NE	NT	Dry	NT	Dry	NT	NT	NT	NT
Biochemical Oxygen Demand	mg/l	2	NE	NT	Dry	NT	Dry	NT	NT	**4.8**	NT
Chemical Oxygen Demand	mg/l	100	NE	NT	Dry	NT	Dry	NT	NT	**212**	NT
Total Dissolved Solids	mg/l	20	NE	NT	Dry	NT	Dry	NT	NT	NT	NT
Cyanide	mg/l	2	5	NT	Dry	NT	Dry	NT	NT	NT	NT
Total Antimony (Sb)	mg/l	5	NE	ND	Dry	ND	Dry	ND	ND	ND	ND
Total Arsenic (As)	mg/l	5	10	ND	Dry	ND	Dry	ND	ND	ND	ND
Total Barium (Ba)	mg/l	5	NE	**228**	Dry	**285**	Dry	**48.4**	**30.9**	**305**	**175**
Total Beryllium (Be)	mg/l	1	6.5	ND	Dry	ND	Dry	ND	ND	ND	ND
Total Cadmium (Cd)	mg/l	1	0.4	ND	Dry	ND	Dry	ND	ND	ND	ND
Total Chromium (Cr)	mg/l	5	50	ND	Dry	**8.9**	Dry	ND	ND	ND	ND
Total Cobalt (Co)	mg/l	5	NE	ND	Dry	**5.7**	Dry	**6.5**	ND	**12.5**	ND
Total Copper (Cu)	mg/l	5	7	ND	Dry	**5.5**	Dry	ND	ND	ND	ND
Total Lead (Pb)	mg/l	5	25	ND	Dry	ND	Dry	ND	ND	ND	ND
Total Nickel (Ni)	mg/l	5	88	ND	Dry	**10.1**	Dry	ND	ND	**20.4**	ND
Total Selenium (Se)	mg/l	10	5	ND	Dry	ND	Dry	ND	ND	ND	ND
Total Silver (Ag)	mg/l	5	0.06	ND	Dry	ND	Dry	ND	ND	ND	ND
Total Thallium (Tl)	mg/l	5.4	NE	ND	Dry	ND	Dry	ND	ND	ND	ND
Total Vanadium (V)	mg/l	5	NE	ND	Dry	**16.0**	Dry	ND	ND	**8.5**	ND
Total Zinc (Zn)	mg/l	10	50	ND	Dry	**151**	Dry	ND	ND	**48.1**	**16.9**
Mercury	mg/l	0.2	0.012	NT	Dry	NT	Dry	NT	NT	NT	NT
Acetone	mg/l	25	NE	ND	Dry	ND	Dry	ND	ND	ND	ND
Acrylonitrile	mg/l	10	NE	ND	Dry	ND	Dry	ND	ND	ND	ND
Benzene	mg/l	1	51	ND	Dry	ND	Dry	ND	ND	ND	ND
Bromochloromethane	mg/l	1	NE	ND	Dry	ND	Dry	ND	ND	ND	ND
Bromodichloromethane	mg/l	1	NE	ND	Dry	ND	Dry	ND	ND	ND	ND
Bromoform	mg/l	1	NE	ND	Dry	ND	Dry	ND	ND	ND	ND
Carbon Disulfide	mg/l	2	NE	ND	Dry	ND	Dry	ND	ND	ND	ND
Bromomethane (Methylbromide)	mg/l	5	NE	ND	Dry	ND	Dry	ND	ND	ND	ND
Carbon tetrachloride	mg/l	1	1.6	ND	Dry	ND	Dry	ND	ND	ND	ND
Chlorobenzene (mono)	mg/l	1	NE	ND	Dry	ND	Dry	ND	ND	ND	ND
Chloroethane	mg/l	1	NE	ND	Dry	ND	Dry	ND	ND	ND	ND
Chloroform	mg/l	1	NE	ND	Dry	ND	Dry	ND	ND	ND	ND
Chloromethane (Methylchloride)	mg/l	1	NE	ND	Dry	ND	Dry	ND	ND	ND	ND
Dibromochloromethane	mg/l	1	NE	ND	Dry	ND	Dry	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane; DBCP	mg/l	3	NE	ND	Dry	ND	Dry	ND	ND	ND	ND
1,2-Dibromoethane; Ethylene dibromide	mg/l	1	NE	ND	Dry	ND	Dry	ND	ND	ND	ND
Dibromomethane	mg/l	1	NE	ND	Dry	ND	Dry	ND	ND	ND	ND
1,2-Dichlorobenzene	mg/l	1	NE	ND	Dry	ND	Dry	ND	ND	ND	ND
1,4-Dichlorobenzene	mg/l	1	NE	ND	Dry	ND	Dry	ND	ND	ND	ND
trans-1,4-Dichloro-2-butene	mg/l	1	NE	ND	Dry	ND	Dry	ND	ND	ND	ND
1,1-Dichloroethane	mg/l	1	NE	ND	Dry	ND	Dry	ND	ND	ND	ND
1,2-Dichloroethane	mg/l	1	NE	ND	Dry	ND	Dry	ND	ND	ND	ND
1,1-Dichloroethene (-ethylene)	mg/l	1	NE	ND	Dry	ND	Dry	ND	ND	ND	ND
cis-1,2-Dichloroethene (-ethylene)	mg/l	1	NE	ND	Dry	ND	Dry	ND	ND	ND	ND
trans-1,2-Dichloroethene (-ethylene)	mg/l	1	NE	ND	Dry	ND	Dry	ND	ND	ND	ND
1,2-Dichloropropane	mg/l	1	NE	ND	Dry	ND	Dry	ND	ND	ND	ND
cis-1,3-Dichloropropene (-propylene)	mg/l	1	NE	ND	Dry	ND	Dry	ND	ND	ND	ND
trans-1,3-Dichloropropene (-propylene)	mg/l	1	NE	ND	Dry	ND	Dry	ND	ND	ND	ND
Ethylbenzene	mg/l	1	NE	ND	Dry	ND	Dry	ND	ND	ND	ND
2-Hexanone	mg/l	5	NE	ND	Dry	ND	Dry	ND	ND	ND	ND
Iodomethane	mg/l	5	NE	ND	Dry	ND	Dry	ND	ND	ND	ND
Dichloromethane (Methylene chloride)	mg/l	2	NE	ND	Dry	ND	Dry	ND	ND	ND	ND
2-Butanone (Methyl ethyl ketone)	mg/l	5	NE	ND	Dry	ND	Dry	ND	ND	ND	ND
4-Methyl-2-Pentanone	mg/l	5	NE	ND	Dry	ND	Dry	ND	ND	ND	ND
Styrene	mg/l	1	NE	ND	Dry	ND	Dry	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	mg/l	1	NE	ND	Dry	ND	Dry	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	mg/l	1	4	ND	Dry	ND	Dry	ND	ND	ND	ND
Tetrachloroethene (-ethylene)	mg/l	1	3.3	ND	Dry	ND	Dry	ND	ND	ND	ND
Toluene	mg/l	1	0.36	ND	Dry	ND	Dry	ND	ND	ND	ND
1,1,1-Trichloroethane	mg/l	1	NE	ND	Dry	ND	Dry	ND	ND	ND	ND
1,1,2-Trichloroethane	mg/l	1	NE	ND	Dry	ND	Dry	ND	ND	ND	ND
Trichloroethene (-ethylene)	mg/l	1	30	ND	Dry	ND	Dry	ND	ND	ND	ND
Trichlorofluoromethane	mg/l	1	NE	ND	Dry	ND	Dry	ND	ND	ND	ND
1,2,3-Trichloropropane	mg/l	1	NE	ND	Dry	ND	Dry	ND	ND	ND	ND
Vinyl acetate	mg/l	2	NE	ND	Dry	ND	Dry	ND	ND	ND	ND
Vinyl chloride	mg/l	1	2.4	ND	Dry	ND	Dry	ND	ND	ND	ND
Xylenes	mg/l	2	NE	ND	Dry	ND	Dry	ND	ND	ND	ND
Methyl-tert-butyl-ether (MTBE)	mg/l	5	NE	NT	Dry	NT	Dry	NT	NT	ND	NT
Naphthalene	mg/l	5	NE	NT	Dry	NT	Dry	NT	NT	ND	NT
Phosphorus	mg/l	0.1	NE	NT	Dry	NT	Dry	NT	NT	NT	NT

Notes:
MCL = Maximum Contaminant Level, as established in the NCDENR, "Redbook" Surface Waters a Wetlands Standards
Section 15A NCAC 02B.0100, .0200, a .0300.
= Not Detected at the method detection limit
NS = Not Sampled
NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
NP = Not Present during sampling event
Shaded cells indicate exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Surface Water Sampling Event (4-21-10)

TEST	UNITS	MDL	MCL	SW-1	SW-2	SW-3	SW-5	SW-6	SW-7	Leachate	Settling
pH	pH units (on-site)	-	<6.0; >9.0	**6.72**	**7.29**	**7.14**	NP	**6.06**	**6.04**	**7.69**	NS
Specific Conductance	mmhos/cm (on-site)	1	NE	**189**	**213**	**273**	NP	**94**	**106**	**310**	NS
Temperature	°C (on-site)	-	29	**13.9**	**12.3**	**15.9**	NP	**15.7**	**14**	**13.3**	NS
Turbidity	NTU (on-site)	0.1	50	NT	NT	NT	NP	NT	NT	NT	NS
Nitrate as N	mg/l	0.1	NE	NT	NT	NT	NP	NT	NT	ND	NS
Nitrate/Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NP	NT	NT	ND	NS
Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NP	NT	NT	ND	NS
Nitrogen	mg/l	0.1	NE	NT	NT	NT	NP	NT	NT	NT	NS
Total Nitrogen, Kjeldahl	mg/l	100	NE	NT	NT	NT	NP	NT	NT	NT	NS
Sulfate	mg/l	75	NE	NT	NT	NT	NP	NT	NT	**477**	NS
Biochemical Oxygen Demand	mg/l	2	NE	NT	NT	NT	NP	NT	NT	**54**	NS
Chemical Oxygen Demand	mg/l	25	NE	NT	NT	NT	NP	NT	NT	**203**	NS
Total Dissolved Solids	mg/l	20	NE	NT	NT	NT	NP	NT	NT	NT	NS
Cyanide	mg/l	2	5	NT	NT	NT	NP	NT	NT	NT	NS
Total Antimony (Sb)	mg/l	5	NE	ND	ND	ND	NP	ND	ND	ND	NS
Total Arsenic (As)	mg/l	5	10	ND	ND	ND	NP	ND	ND	**8.6**	NS
Total Barium (Ba)	mg/l	5	NE	**123**	**178**	**172**	NP	**34.3**	**41.4**	**124**	NS
Total Beryllium (Be)	mg/l	1	6.5	ND	ND	ND	NP	ND	ND	ND	NS
Total Cadmium (Cd)	mg/l	1	0.4	ND	ND	ND	NP	ND	ND	ND	NS
Total Chromium (Cr)	mg/l	5	50	ND	ND	ND	NP	ND	ND	**8**	NS
Total Cobalt (Co)	mg/l	5	NE	ND	ND	ND	NP	ND	ND	**11.7**	NS
Total Copper (Cu)	mg/l	5	7	ND	ND	ND	NP	ND	ND	**6.8**	NS
Total Lead (Pb)	mg/l	5	25	ND	ND	ND	NP	ND	ND	ND	NS
Total Nickel (Ni)	mg/l	5	88	ND	ND	ND	NP	ND	ND	**35.3**	NS
Total Selenium (Se)	mg/l	10	5	ND	ND	ND	NP	ND	ND	ND	NS
Total Silver (Ag)	mg/l	5	0.06	ND	ND	ND	NP	ND	ND	ND	NS
Total Thallium (Tl)	mg/l	5.4	NE	ND	ND	ND	NP	ND	ND	ND	NS
Total Vanadium (V)	mg/l	5	NE	ND	ND	ND	NP	ND	ND	**6.8**	NS
Total Zinc (Zn)	mg/l	10	50	ND	**49.8**	**32.9**	NP	ND	ND	**12.1**	NS
Mercury	mg/l	0.2	0.012	NT	NT	NT	NP	NT	NT	NT	NS
Acetone	mg/l	25	NE	ND	ND	ND	NP	ND	ND	ND	NS
Acrylonitrile	mg/l	10	NE	ND	ND	ND	NP	ND	ND	NT	NS
Benzene	mg/l	1	51	ND	ND	ND	NP	ND	ND	ND	NS
Bromochloromethane	mg/l	1	NE	ND	ND	ND	NP	ND	ND	ND	NS
Bromodichloromethane	mg/l	1	NE	ND	ND	ND	NP	ND	ND	ND	NS
Bromoform	mg/l	1	NE	ND	ND	ND	NP	ND	ND	ND	NS
Carbon Disulfide	mg/l	2	NE	ND	ND	ND	NP	ND	ND	NT	NS
Bromomethane (Methylbromide)	mg/l	5	NE	ND	ND	ND	NP	ND	ND	ND	NS
Carbon tetrachloride	mg/l	1	1.6	ND	ND	ND	NP	ND	ND	ND	NS
Chlorobenzene (mono)	mg/l	1	NE	ND	ND	ND	NP	ND	ND	ND	NS
Chloroethane	mg/l	1	NE	ND	ND	ND	NP	ND	ND	ND	NS
Chloroform	mg/l	1	NE	ND	ND	ND	NP	ND	ND	ND	NS
Chloromethane (Methylchloride)	mg/l	1	NE	ND	ND	ND	NP	ND	ND	ND	NS
Dibromochloromethane	mg/l	1	NE	ND	ND	ND	NP	ND	ND	ND	NS
1,2-Dibromo-3-chloropropane; DBCP	mg/l	3	NE	ND	ND	ND	NP	ND	ND	ND	NS
1,2-Dibromoethane; Ethylene dibromide	mg/l	1	NE	ND	ND	ND	NP	ND	ND	ND	NS
Dibromomethane	mg/l	1	NE	ND	ND	ND	NP	ND	ND	ND	NS
1,2-Dichlorobenzene	mg/l	1	NE	ND	ND	ND	NP	ND	ND	ND	NS
1,4-Dichlorobenzene	mg/l	1	NE	ND	ND	ND	NP	ND	ND	ND	NS
trans-1,4-Dichloro-2-butene	mg/l	1	NE	ND	ND	ND	NP	ND	ND	NT	NS
1,1-Dichloroethane	mg/l	1	NE	ND	ND	ND	NP	ND	ND	ND	NS
1,2-Dichloroethane	mg/l	1	NE	ND	ND	ND	NP	ND	ND	ND	NS
1,1-Dichloroethene (-ethylene)	mg/l	1	NE	ND	ND	ND	NP	ND	ND	ND	NS
cis-1,2-Dichloroethene (-ethylene)	mg/l	1	NE	ND	ND	ND	NP	ND	ND	**2**	NS
trans-1,2-Dichloroethene (-ethylene)	mg/l	1	NE	ND	ND	ND	NP	ND	ND	ND	NS
1,2-Dichloropropane	mg/l	1	NE	ND	ND	ND	NP	ND	ND	ND	NS
cis-1,3-Dichloropropene (-propylene)	mg/l	1	NE	ND	ND	ND	NP	ND	ND	ND	NS
trans-1,3-Dichloropropene (-propylene)	mg/l	1	NE	ND	ND	ND	NP	ND	ND	ND	NS
Ethylbenzene	mg/l	1	NE	ND	ND	ND	NP	ND	ND	ND	NS
2-Hexanone	mg/l	5	NE	ND	ND	ND	NP	ND	ND	ND	NS
Iodomethane	mg/l	5	NE	ND	ND	ND	NP	ND	ND	NT	NS
Dichloromethane (Methylene chloride)	mg/l	2	NE	ND	ND	ND	NP	ND	ND	ND	NS
2-Butanone (Methyl ethyl ketone)	mg/l	5	NE	ND	ND	ND	NP	ND	ND	ND	NS
4-Methyl-2-Pentanone	mg/l	5	NE	ND	ND	ND	NP	ND	ND	ND	NS
Styrene	mg/l	1	NE	ND	ND	ND	NP	ND	ND	ND	NS
1,1,1,2-Tetrachloroethane	mg/l	1	NE	ND	ND	ND	NP	ND	ND	ND	NS
1,1,2,2-Tetrachloroethane	mg/l	1	4	ND	ND	ND	NP	ND	ND	ND	NS
Tetrachloroethene (-ethylene)	mg/l	1	3.3	ND	ND	ND	NP	ND	ND	ND	NS
Toluene	mg/l	1	0.36	ND	ND	ND	NP	ND	ND	**1.1**	NS
1,1,1-Trichloroethane	mg/l	1	NE	ND	ND	ND	NP	ND	ND	ND	NS
1,1,2-Trichloroethane	mg/l	1	NE	ND	ND	ND	NP	ND	ND	ND	NS
Trichloroethene (-ethylene)	mg/l	1	30	ND	ND	ND	NP	ND	ND	ND	NS
Trichlorofluoromethane	mg/l	1	NE	ND	ND	ND	NP	ND	ND	ND	NS
1,2,3-Trichloropropane	mg/l	1	NE	ND	ND	ND	NP	ND	ND	ND	NS
Vinyl acetate	mg/l	2	NE	ND	ND	ND	NP	ND	ND	ND	NS
Vinyl chloride	mg/l	1	2.4	ND	ND	ND	NP	ND	ND	ND	NS
Xylenes	mg/l	2	NE	ND	ND	ND	NP	ND	ND	NT	NS
Methyl-tert-butyl-ether (MTBE)	mg/l	1	NE	NT	NT	NT	NP	NT	NT	ND	NS
Naphthalene	mg/l	1	NE	NT	NT	NT	NP	NT	NT	ND	NS
Phosphorus	mg/l	0.1	NE	NT	NT	NT	NP	NT	NT	**0.26**	NS

Notes:
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Section 15A NCAC 02B.0100, .0200, a .0300.
ND = Not Detected at the method detection limit
NS = Not Sampled
NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
NP = Not Present during sampling event
Shaded cells indicate exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Surface Water Sampling Event (10-26-10)

TEST	UNITS	MDL	MCL	SW-1	SW-2	SW-3	SW-5	SW-6	SW-7	Leachate	Settling
pH	pH units (on-site)	-	<6.0; >9.0	**6.31**	**6.14**	**7.15**	**6.11**	**5.7**	**6.39**	**7.31**	NS
Specific Conductance	mmhos/cm (on-site)	1	NE	**203**	**250**	**287**	**158**	**50**	**53**	**20400**	NS
Temperature	°C (on-site)	-	29	**15.8**	**15.2**	**16.6**	**17.5**	**14.7**	**13.4**	**18.2**	NS
Turbidity	NTU (on-site)	0.1	50	NT	NT	NT	NT	NT	NT	NT	NS
Nitrate as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	**5.5**	NS
Nitrate/Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	**6**	NS
Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	**0.51**	NS
Nitrogen	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	NT	NS
Total Nitrogen, Kjeldahl	mg/l	100	NE	NT	NT	NT	NT	NT	NT	NT	NS
Sulfate	mg/l	75	NE	NT	NT	NT	NT	NT	NT	**7670**	NS
Biochemical Oxygen Demand	mg/l	2	NE	NT	NT	NT	NT	NT	NT	**40**	NS
Chemical Oxygen Demand	mg/l	25	NE	NT	NT	NT	NT	NT	NT	**96**	NS
Total Dissolved Solids	mg/l	20	NE	NT	NT	NT	NT	NT	NT	NT	NS
Cyanide	mg/l	2	5	NT	NT	NT	NT	NT	NT	NT	NS
Total Antimony (Sb)	mg/l	5	NE	ND	ND	ND	ND	ND	ND	**13.9**	NS
Total Arsenic (As)	mg/l	5	10	ND	ND	ND	ND	ND	ND	**29.4**	NS
Total Barium (Ba)	mg/l	5	NE	**209**	**180**	**350**	**126**	**40.1**	**32.9**	**172**	NS
Total Beryllium (Be)	mg/l	1	6.5	ND	ND	ND	ND	ND	ND	**1.3**	NS
Total Cadmium (Cd)	mg/l	1	0.4	ND	ND	ND	ND	ND	ND	ND	NS
Total Chromium (Cr)	mg/l	5	50	ND	ND	**13.2**	ND	ND	ND	**10.7**	NS
Total Cobalt (Co)	mg/l	5	NE	ND	ND	**17.7**	**48.8**	ND	ND	ND	NS
Total Copper (Cu)	mg/l	5	7	ND	ND	**9**	ND	ND	ND	ND	NS
Total Lead (Pb)	mg/l	5	25	ND	ND	ND	ND	ND	ND	ND	NS
Total Nickel (Ni)	mg/l	5	88	ND	ND	**9**	**5**	ND	ND	**44.4**	NS
Total Selenium (Se)	mg/l	10	5	ND	ND	ND	ND	ND	ND	**29.6**	NS
Total Silver (Ag)	mg/l	5	0.06	ND	ND	ND	ND	ND	ND	ND	NS
Total Thallium (Tl)	mg/l	5.4	NE	ND	ND	ND	ND	ND	ND	ND	NS
Total Vanadium (V)	mg/l	5	NE	ND	ND	**27.9**	ND	ND	ND	**21**	NS
Total Zinc (Zn)	mg/l	10	50	ND	**31.2**	**60.6**	ND	ND	ND	ND	NS
Mercury	mg/l	0.2	0.012	NT	NT	NT	ND	NT	NT	NT	NS
Acetone	mg/l	25	NE	ND	ND	ND	ND	ND	ND	ND	NS
Acrylonitrile	mg/l	10	NE	ND	ND	ND	ND	ND	ND	NT	NS
Benzene	mg/l	1	51	ND	ND	ND	ND	ND	ND	**1**	NS
Bromochloromethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	NS
Bromodichloromethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	NS
Bromoform	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	NS
Carbon Disulfide	mg/l	2	NE	ND	ND	ND	ND	ND	ND	NT	NS
Bromomethane (Methylbromide)	mg/l	2	NE	ND	ND	ND	ND	ND	ND	ND	NS
Carbon tetrachloride	mg/l	1	1.6	ND	ND	ND	ND	ND	ND	ND	NS
Chlorobenzene (mono)	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	NS
Chloroethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	NS
Chloroform	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	NS
Chloromethane (Methylchloride)	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	NS
Dibromochloromethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	NS
1,2-Dibromo-3-chloropropane; DBCP	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
1,2-Dibromoethane; Ethylene dibromide	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	NS
Dibromomethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	NS
1,2-Dichlorobenzene	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	NS
1,4-Dichlorobenzene	mg/l	1	NE	ND	ND	ND	ND	ND	ND	**3.4**	NS
trans-1,4-Dichloro-2-butene	mg/l	1	NE	ND	ND	ND	ND	ND	ND	NT	NS
1,1-Dichloroethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	NS
1,2-Dichloroethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	NS
1,1-Dichloroethene (-ethylene)	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	NS
cis-1,2-Dichloroethene (-ethylene)	mg/l	1	NE	ND	ND	ND	ND	ND	ND	**1.2**	NS
trans-1,2-Dichloroethene (-ethylene)	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	NS
1,2-Dichloropropane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	NS
cis-1,3-Dichloropropene (-propylene)	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	NS
trans-1,3-Dichloropropene (-propylene)	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	NS
Ethylbenzene	mg/l	1	NE	ND	ND	ND	ND	ND	ND	**6.8**	NS
2-Hexanone	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
Iodomethane	mg/l	5	NE	ND	ND	ND	ND	ND	ND	NT	NS
Dichloromethane (Methylene chloride)	mg/l	2	NE	ND	ND	ND	ND	ND	ND	ND	NS
2-Butanone (Methyl ethyl ketone)	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
4-Methyl-2-Pentanone	mg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
Styrene	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	NS
1,1,1,2-Tetrachloroethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	NS
1,1,2,2-Tetrachloroethane	mg/l	1	4	ND	ND	ND	ND	ND	ND	ND	NS
Tetrachloroethene (-ethylene)	mg/l	1	3.3	ND	ND	ND	ND	ND	ND	ND	NS
Toluene	mg/l	1	0.36	ND	ND	ND	ND	ND	ND	**8.4**	NS
1,1,1-Trichloroethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	NS
1,1,2-Trichloroethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	NS
Trichloroethene (-ethylene)	mg/l	1	30	ND	ND	ND	ND	ND	ND	ND	NS
Trichlorofluoromethane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	NS
1,2,3-Trichloropropane	mg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	NS
Vinyl acetate	mg/l	2	NE	ND	ND	ND	ND	ND	ND	ND	NS
Vinyl chloride	mg/l	1	2.4	ND	ND	ND	ND	ND	ND	ND	NS
Xylenes	mg/l	2	NE	ND	ND	ND	ND	ND	ND	NT	NS
m&p-Xylenes	mg/l	2	NE	ND	ND	ND	ND	ND	ND	**10.9**	NS
o-Xylenes	mg/l	1	NE	ND	ND	ND	ND	ND	ND	**5.7**	NS
Methyl-tert-butyl-ether (MTBE)	mg/l	1	NE	NT	NT	NT	NT	NT	NT	**2.9**	NS
Naphthalene	mg/l	1	NE	NT	NT	NT	NT	NT	NT	**6.5**	NS
p-isopropyltoluene	mg/l	1	NE	NT	NT	NT	NT	NT	NT	**2.9**	NS
Phosphorus	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	**1.40**	NS

Notes:
MCL = Maximum Contaminant Level, as established in the NCDENR, "Redbook" Surface Waters a Wetlands Standards Section 15A NCAC 02B.0100, .0200, a .0300.
ND = Not Detected at the method detection limit
NS = Not Sampled
NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
Shaded cells indicate exceedances of MCLs.

APPENDIX C

LABORATORY ANALYTICAL RESULTS

Pace Analytical Services, Inc.
2225 Riverside Dr.
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November 12, 2010

Mr. Stephen King
Haywood Co. Solid Waste
278 Recycle Rd.
Clyde, NC 28721

RE: Project: White Oak LF 10/26/10
Pace Project No.: 9280732

Dear Mr. King:
Enclosed are the analytical results for sample(s) received by the laboratory on October 27, 2010. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

Analyses were performed at the Pace Analytical Services location indicated on the sample analyte page for analysis unless otherwise footnoted.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Tom Williams

tom.williams@pacelabs.com
Project Manager

Enclosures

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CERTIFICATIONS

Project: White Oak LF 10/26/10
Pace Project No.: 9280732

Charlotte Certification IDs

9800 Kincey Ave. Ste 100, Huntersville, NC 28078
Louisiana/LELAP Certification #: 04034
New Jersey Certification #: NC012
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12
Pennsylvania Certification #: 68-00784
South Carolina Certification #: 99006001
South Carolina Drinking Water Cert. #: 99006003
Virginia Certification #: 00213
Connecticut Certification #: PH-0104
Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
Louisiana DHH Drinking Water # LA 100031
West Virginia Certification #: 357

Asheville Certification IDs

2225 Riverside Dr., Asheville, NC 28804
Connecticut Certification #: PH-0106
Florida/NELAP Certification #: E87648
Massachusetts Certification #: M-NC030
New Jersey Certification #: NC011
North Carolina Bioassay Certification #: 9
North Carolina Drinking Water Certification #: 37712
North Carolina Wastewater Certification #: 40
Pennsylvania Certification #: 68-03578
South Carolina Bioassay Certification #: 99030002
South Carolina Certification #: 99030001
Virginia Certification #: 00072
West Virginia Certification #: 356

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ANALYTICAL RESULTS

Project: White Oak LF 10/26/10
Pace Project No.: 9280732

Sample: SW-1 **Lab ID: 9280732001** Collected: 10/26/10 14:30 Received: 10/27/10 08:45 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	**MPS**			1		11/03/10 13:47		
Collected Date	**10/26/10**			1		11/03/10 13:47		
Collected Time	**14:30**			1		11/03/10 13:47		
Field pH	**6.31**	Std. Units		1		11/03/10 13:47		
Field Temperature	**15.8**	deg C		1		11/03/10 13:47		
Field Specific Conductance	**203**	umhos/cm		1		11/03/10 13:47		
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Antimony	ND	ug/L	5.0	1	10/29/10 11:20	11/01/10 22:24	7440-36-0	
Arsenic	ND	ug/L	5.0	1	10/29/10 11:20	11/01/10 22:24	7440-38-2	
Barium	**209**	ug/L	5.0	1	10/29/10 11:20	11/01/10 22:24	7440-39-3	
Beryllium	ND	ug/L	1.0	1	10/29/10 11:20	11/01/10 22:24	7440-41-7	
Cadmium	ND	ug/L	1.0	1	10/29/10 11:20	11/01/10 22:24	7440-43-9	
Chromium	ND	ug/L	5.0	1	10/29/10 11:20	11/01/10 22:24	7440-47-3	
Cobalt	ND	ug/L	5.0	1	10/29/10 11:20	11/01/10 22:24	7440-48-4	
Copper	ND	ug/L	5.0	1	10/29/10 11:20	11/01/10 22:24	7440-50-8	
Lead	ND	ug/L	5.0	1	10/29/10 11:20	11/01/10 22:24	7439-92-1	
Nickel	ND	ug/L	5.0	1	10/29/10 11:20	11/01/10 22:24	7440-02-0	
Selenium	ND	ug/L	10.0	1	10/29/10 11:20	11/01/10 22:24	7782-49-2	
Silver	ND	ug/L	5.0	1	10/29/10 11:20	11/01/10 22:24	7440-22-4	
Thallium	ND	ug/L	5.4	1	10/29/10 11:20	11/02/10 13:43	7440-28-0	
Vanadium	ND	ug/L	5.0	1	10/29/10 11:20	11/01/10 22:24	7440-62-2	
Zinc	ND	ug/L	10.0	1	10/29/10 11:20	11/01/10 22:24	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		10/29/10 12:01	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		10/29/10 12:01	107-13-1	
Benzene	ND	ug/L	1.0	1		10/29/10 12:01	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		10/29/10 12:01	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		10/29/10 12:01	75-27-4	
Bromoform	ND	ug/L	1.0	1		10/29/10 12:01	75-25-2	
Bromomethane	ND	ug/L	2.0	1		10/29/10 12:01	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		10/29/10 12:01	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		10/29/10 12:01	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		10/29/10 12:01	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		10/29/10 12:01	108-90-7	
Chloroethane	ND	ug/L	1.0	1		10/29/10 12:01	75-00-3	
Chloroform	ND	ug/L	1.0	1		10/29/10 12:01	67-66-3	
Chloromethane	ND	ug/L	1.0	1		10/29/10 12:01	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		10/29/10 12:01	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		10/29/10 12:01	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		10/29/10 12:01	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		10/29/10 12:01	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		10/29/10 12:01	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		10/29/10 12:01	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		10/29/10 12:01	110-57-6	

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(704)875-9092

ANALYTICAL RESULTS

Project: White Oak LF 10/26/10
Pace Project No.: 9280732

Sample: SW-1 **Lab ID: 9280732001** Collected: 10/26/10 14:30 Received: 10/27/10 08:45 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
1,1-Dichloroethane	ND	ug/L	1.0	1		10/29/10 12:01	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		10/29/10 12:01	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		10/29/10 12:01	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		10/29/10 12:01	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		10/29/10 12:01	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		10/29/10 12:01	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		10/29/10 12:01	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		10/29/10 12:01	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		10/29/10 12:01	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		10/29/10 12:01	591-78-6	
Iodomethane	ND	ug/L	5.0	1		10/29/10 12:01	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		10/29/10 12:01	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		10/29/10 12:01	108-10-1	
Styrene	ND	ug/L	1.0	1		10/29/10 12:01	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		10/29/10 12:01	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		10/29/10 12:01	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		10/29/10 12:01	127-18-4	
Toluene	ND	ug/L	1.0	1		10/29/10 12:01	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		10/29/10 12:01	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		10/29/10 12:01	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		10/29/10 12:01	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		10/29/10 12:01	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		10/29/10 12:01	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		10/29/10 12:01	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		10/29/10 12:01	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		10/29/10 12:01	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		10/29/10 12:01	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		10/29/10 12:01	95-47-6	
4-Bromofluorobenzene (S)	91	%	70-130	1		10/29/10 12:01	460-00-4	
Dibromofluoromethane (S)	98	%	70-130	1		10/29/10 12:01	1868-53-7	
1,2-Dichloroethane-d4 (S)	105	%	70-130	1		10/29/10 12:01	17060-07-0	
Toluene-d8 (S)	103	%	70-130	1		10/29/10 12:01	2037-26-5	

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(704)875-9092

ANALYTICAL RESULTS

Project: White Oak LF 10/26/10
Pace Project No.: 9280732

Sample: SW-2 **Lab ID: 9280732002** Collected: 10/26/10 14:45 Received: 10/27/10 08:45 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	**MPS**			1		11/03/10 13:48		
Collected Date	**10/26/10**			1		11/03/10 13:48		
Collected Time	**14:45**			1		11/03/10 13:48		
Field pH	**6.14**	Std. Units		1		11/03/10 13:48		
Field Temperature	**15.2**	deg C		1		11/03/10 13:48		
Field Specific Conductance	**250**	umhos/cm		1		11/03/10 13:48		
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Antimony	ND	ug/L	5.0	1	10/29/10 11:20	11/01/10 22:38	7440-36-0	
Arsenic	ND	ug/L	5.0	1	10/29/10 11:20	11/01/10 22:38	7440-38-2	
Barium	**180**	ug/L	5.0	1	10/29/10 11:20	11/01/10 22:38	7440-39-3	
Beryllium	ND	ug/L	1.0	1	10/29/10 11:20	11/01/10 22:38	7440-41-7	
Cadmium	ND	ug/L	1.0	1	10/29/10 11:20	11/01/10 22:38	7440-43-9	
Chromium	ND	ug/L	5.0	1	10/29/10 11:20	11/01/10 22:38	7440-47-3	
Cobalt	ND	ug/L	5.0	1	10/29/10 11:20	11/01/10 22:38	7440-48-4	
Copper	ND	ug/L	5.0	1	10/29/10 11:20	11/01/10 22:38	7440-50-8	
Lead	ND	ug/L	5.0	1	10/29/10 11:20	11/01/10 22:38	7439-92-1	
Nickel	ND	ug/L	5.0	1	10/29/10 11:20	11/01/10 22:38	7440-02-0	
Selenium	ND	ug/L	10.0	1	10/29/10 11:20	11/01/10 22:38	7782-49-2	
Silver	ND	ug/L	5.0	1	10/29/10 11:20	11/01/10 22:38	7440-22-4	
Thallium	ND	ug/L	5.4	1	10/29/10 11:20	11/01/10 22:38	7440-28-0	
Vanadium	ND	ug/L	5.0	1	10/29/10 11:20	11/01/10 22:38	7440-62-2	
Zinc	**31.2**	ug/L	10.0	1	10/29/10 11:20	11/01/10 22:38	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		10/29/10 12:27	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		10/29/10 12:27	107-13-1	
Benzene	ND	ug/L	1.0	1		10/29/10 12:27	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		10/29/10 12:27	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		10/29/10 12:27	75-27-4	
Bromoform	ND	ug/L	1.0	1		10/29/10 12:27	75-25-2	
Bromomethane	ND	ug/L	2.0	1		10/29/10 12:27	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		10/29/10 12:27	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		10/29/10 12:27	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		10/29/10 12:27	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		10/29/10 12:27	108-90-7	
Chloroethane	ND	ug/L	1.0	1		10/29/10 12:27	75-00-3	
Chloroform	ND	ug/L	1.0	1		10/29/10 12:27	67-66-3	
Chloromethane	ND	ug/L	1.0	1		10/29/10 12:27	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		10/29/10 12:27	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		10/29/10 12:27	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		10/29/10 12:27	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		10/29/10 12:27	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		10/29/10 12:27	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		10/29/10 12:27	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		10/29/10 12:27	110-57-6	

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ANALYTICAL RESULTS

Project: White Oak LF 10/26/10
Pace Project No.: 9280732

Sample: SW-2 **Lab ID: 9280732002** Collected: 10/26/10 14:45 Received: 10/27/10 08:45 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
1,1-Dichloroethane	ND	ug/L	1.0	1		10/29/10 12:27	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		10/29/10 12:27	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		10/29/10 12:27	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		10/29/10 12:27	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		10/29/10 12:27	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		10/29/10 12:27	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		10/29/10 12:27	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		10/29/10 12:27	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		10/29/10 12:27	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		10/29/10 12:27	591-78-6	
Iodomethane	ND	ug/L	5.0	1		10/29/10 12:27	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		10/29/10 12:27	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		10/29/10 12:27	108-10-1	
Styrene	ND	ug/L	1.0	1		10/29/10 12:27	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		10/29/10 12:27	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		10/29/10 12:27	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		10/29/10 12:27	127-18-4	
Toluene	ND	ug/L	1.0	1		10/29/10 12:27	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		10/29/10 12:27	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		10/29/10 12:27	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		10/29/10 12:27	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		10/29/10 12:27	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		10/29/10 12:27	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		10/29/10 12:27	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		10/29/10 12:27	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		10/29/10 12:27	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		10/29/10 12:27	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		10/29/10 12:27	95-47-6	
4-Bromofluorobenzene (S)	98	%	70-130	1		10/29/10 12:27	460-00-4	
Dibromofluoromethane (S)	102	%	70-130	1		10/29/10 12:27	1868-53-7	
1,2-Dichloroethane-d4 (S)	106	%	70-130	1		10/29/10 12:27	17060-07-0	
Toluene-d8 (S)	98	%	70-130	1		10/29/10 12:27	2037-26-5	

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ANALYTICAL RESULTS

Project: White Oak LF 10/26/10
Pace Project No.: 9280732

Sample: SW-3 **Lab ID: 9280732003** Collected: 10/26/10 15:00 Received: 10/27/10 08:45 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	**MPS**			1		11/03/10 13:58		
Collected Date	**10/26/10**			1		11/03/10 13:58		
Collected Time	**15:00**			1		11/03/10 13:58		
Field pH	**7.15**	Std. Units		1		11/03/10 13:58		
Field Temperature	**16.6**	deg C		1		11/03/10 13:58		
Field Specific Conductance	**287**	umhos/cm		1		11/03/10 13:58		
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Antimony	ND	ug/L	5.0	1	10/29/10 11:20	11/01/10 22:41	7440-36-0	
Arsenic	ND	ug/L	5.0	1	10/29/10 11:20	11/01/10 22:41	7440-38-2	
Barium	**350**	ug/L	5.0	1	10/29/10 11:20	11/01/10 22:41	7440-39-3	
Beryllium	ND	ug/L	1.0	1	10/29/10 11:20	11/01/10 22:41	7440-41-7	
Cadmium	ND	ug/L	1.0	1	10/29/10 11:20	11/01/10 22:41	7440-43-9	
Chromium	**13.2**	ug/L	5.0	1	10/29/10 11:20	11/01/10 22:41	7440-47-3	
Cobalt	**17.7**	ug/L	5.0	1	10/29/10 11:20	11/01/10 22:41	7440-48-4	
Copper	**9.0**	ug/L	5.0	1	10/29/10 11:20	11/01/10 22:41	7440-50-8	
Lead	ND	ug/L	5.0	1	10/29/10 11:20	11/01/10 22:41	7439-92-1	
Nickel	**9.0**	ug/L	5.0	1	10/29/10 11:20	11/01/10 22:41	7440-02-0	
Selenium	ND	ug/L	10.0	1	10/29/10 11:20	11/01/10 22:41	7782-49-2	
Silver	ND	ug/L	5.0	1	10/29/10 11:20	11/01/10 22:41	7440-22-4	
Thallium	ND	ug/L	5.4	1	10/29/10 11:20	11/01/10 22:41	7440-28-0	
Vanadium	**27.9**	ug/L	5.0	1	10/29/10 11:20	11/01/10 22:41	7440-62-2	
Zinc	**60.6**	ug/L	10.0	1	10/29/10 11:20	11/01/10 22:41	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		10/29/10 13:06	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		10/29/10 13:06	107-13-1	
Benzene	ND	ug/L	1.0	1		10/29/10 13:06	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		10/29/10 13:06	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		10/29/10 13:06	75-27-4	
Bromoform	ND	ug/L	1.0	1		10/29/10 13:06	75-25-2	
Bromomethane	ND	ug/L	2.0	1		10/29/10 13:06	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		10/29/10 13:06	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		10/29/10 13:06	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		10/29/10 13:06	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		10/29/10 13:06	108-90-7	
Chloroethane	ND	ug/L	1.0	1		10/29/10 13:06	75-00-3	
Chloroform	ND	ug/L	1.0	1		10/29/10 13:06	67-66-3	
Chloromethane	ND	ug/L	1.0	1		10/29/10 13:06	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		10/29/10 13:06	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		10/29/10 13:06	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		10/29/10 13:06	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		10/29/10 13:06	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		10/29/10 13:06	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		10/29/10 13:06	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		10/29/10 13:06	110-57-6	

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ANALYTICAL RESULTS

Project: White Oak LF 10/26/10
Pace Project No.: 9280732

Sample: SW-3 **Lab ID: 9280732003** Collected: 10/26/10 15:00 Received: 10/27/10 08:45 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
1,1-Dichloroethane	ND	ug/L	1.0	1		10/29/10 13:06	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		10/29/10 13:06	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		10/29/10 13:06	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		10/29/10 13:06	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		10/29/10 13:06	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		10/29/10 13:06	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		10/29/10 13:06	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		10/29/10 13:06	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		10/29/10 13:06	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		10/29/10 13:06	591-78-6	
Iodomethane	ND	ug/L	5.0	1		10/29/10 13:06	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		10/29/10 13:06	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		10/29/10 13:06	108-10-1	
Styrene	ND	ug/L	1.0	1		10/29/10 13:06	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		10/29/10 13:06	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		10/29/10 13:06	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		10/29/10 13:06	127-18-4	
Toluene	ND	ug/L	1.0	1		10/29/10 13:06	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		10/29/10 13:06	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		10/29/10 13:06	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		10/29/10 13:06	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		10/29/10 13:06	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		10/29/10 13:06	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		10/29/10 13:06	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		10/29/10 13:06	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		10/29/10 13:06	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		10/29/10 13:06	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		10/29/10 13:06	95-47-6	
4-Bromofluorobenzene (S)	94	%	70-130	1		10/29/10 13:06	460-00-4	
Dibromofluoromethane (S)	105	%	70-130	1		10/29/10 13:06	1868-53-7	
1,2-Dichloroethane-d4 (S)	109	%	70-130	1		10/29/10 13:06	17060-07-0	
Toluene-d8 (S)	102	%	70-130	1		10/29/10 13:06	2037-26-5	

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ANALYTICAL RESULTS

Project: White Oak LF 10/26/10
Pace Project No.: 9280732

Sample: SW-5 **Lab ID: 9280732004** Collected: 10/26/10 16:00 Received: 10/27/10 08:45 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	**MPS**			1		11/03/10 13:59		
Collected Date	**10/26/10**			1		11/03/10 13:59		
Collected Time	**16:00**			1		11/03/10 13:59		
Field pH	**6.11**	Std. Units		1		11/03/10 13:59		
Field Temperature	**17.5**	deg C		1		11/03/10 13:59		
Field Specific Conductance	**158**	umhos/cm		1		11/03/10 13:59		
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Antimony	ND	ug/L	5.0	1	10/29/10 11:20	11/01/10 22:45	7440-36-0	
Arsenic	ND	ug/L	5.0	1	10/29/10 11:20	11/01/10 22:45	7440-38-2	
Barium	**126**	ug/L	5.0	1	10/29/10 11:20	11/01/10 22:45	7440-39-3	
Beryllium	ND	ug/L	1.0	1	10/29/10 11:20	11/01/10 22:45	7440-41-7	
Cadmium	ND	ug/L	1.0	1	10/29/10 11:20	11/01/10 22:45	7440-43-9	
Chromium	ND	ug/L	5.0	1	10/29/10 11:20	11/01/10 22:45	7440-47-3	
Cobalt	**48.8**	ug/L	5.0	1	10/29/10 11:20	11/01/10 22:45	7440-48-4	
Copper	ND	ug/L	5.0	1	10/29/10 11:20	11/01/10 22:45	7440-50-8	
Lead	ND	ug/L	5.0	1	10/29/10 11:20	11/01/10 22:45	7439-92-1	
Nickel	**5.0**	ug/L	5.0	1	10/29/10 11:20	11/01/10 22:45	7440-02-0	
Selenium	ND	ug/L	10.0	1	10/29/10 11:20	11/01/10 22:45	7782-49-2	
Silver	ND	ug/L	5.0	1	10/29/10 11:20	11/01/10 22:45	7440-22-4	
Thallium	ND	ug/L	5.4	1	10/29/10 11:20	11/01/10 22:45	7440-28-0	
Vanadium	ND	ug/L	5.0	1	10/29/10 11:20	11/01/10 22:45	7440-62-2	
Zinc	ND	ug/L	10.0	1	10/29/10 11:20	11/01/10 22:45	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		10/29/10 13:47	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		10/29/10 13:47	107-13-1	
Benzene	ND	ug/L	1.0	1		10/29/10 13:47	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		10/29/10 13:47	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		10/29/10 13:47	75-27-4	
Bromoform	ND	ug/L	1.0	1		10/29/10 13:47	75-25-2	
Bromomethane	ND	ug/L	2.0	1		10/29/10 13:47	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		10/29/10 13:47	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		10/29/10 13:47	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		10/29/10 13:47	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		10/29/10 13:47	108-90-7	
Chloroethane	ND	ug/L	1.0	1		10/29/10 13:47	75-00-3	
Chloroform	ND	ug/L	1.0	1		10/29/10 13:47	67-66-3	
Chloromethane	ND	ug/L	1.0	1		10/29/10 13:47	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		10/29/10 13:47	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		10/29/10 13:47	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		10/29/10 13:47	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		10/29/10 13:47	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		10/29/10 13:47	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		10/29/10 13:47	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		10/29/10 13:47	110-57-6	

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ANALYTICAL RESULTS

Project: White Oak LF 10/26/10
Pace Project No.: 9280732

Sample: SW-5 **Lab ID: 9280732004** Collected: 10/26/10 16:00 Received: 10/27/10 08:45 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
1,1-Dichloroethane	ND	ug/L	1.0	1		10/29/10 13:47	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		10/29/10 13:47	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		10/29/10 13:47	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		10/29/10 13:47	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		10/29/10 13:47	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		10/29/10 13:47	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		10/29/10 13:47	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		10/29/10 13:47	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		10/29/10 13:47	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		10/29/10 13:47	591-78-6	
Iodomethane	ND	ug/L	5.0	1		10/29/10 13:47	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		10/29/10 13:47	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		10/29/10 13:47	108-10-1	
Styrene	ND	ug/L	1.0	1		10/29/10 13:47	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		10/29/10 13:47	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		10/29/10 13:47	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		10/29/10 13:47	127-18-4	
Toluene	ND	ug/L	1.0	1		10/29/10 13:47	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		10/29/10 13:47	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		10/29/10 13:47	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		10/29/10 13:47	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		10/29/10 13:47	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		10/29/10 13:47	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		10/29/10 13:47	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		10/29/10 13:47	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		10/29/10 13:47	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		10/29/10 13:47	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		10/29/10 13:47	95-47-6	
4-Bromofluorobenzene (S)	94	%	70-130	1		10/29/10 13:47	460-00-4	
Dibromofluoromethane (S)	98	%	70-130	1		10/29/10 13:47	1868-53-7	
1,2-Dichloroethane-d4 (S)	97	%	70-130	1		10/29/10 13:47	17060-07-0	
Toluene-d8 (S)	99	%	70-130	1		10/29/10 13:47	2037-26-5	

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ANALYTICAL RESULTS

Project: White Oak LF 10/26/10
Pace Project No.: 9280732

Sample: SW-6 **Lab ID: 9280732005** Collected: 10/26/10 12:00 Received: 10/27/10 08:45 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	**MPS**			1		11/03/10 13:59		
Collected Date	**10/26/10**			1		11/03/10 13:59		
Collected Time	**12:00**			1		11/03/10 13:59		
Field pH	**5.70**	Std. Units		1		11/03/10 13:59		
Field Temperature	**14.7**	deg C		1		11/03/10 13:59		
Field Specific Conductance	**50**	umhos/cm		1		11/03/10 13:59		
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Antimony	ND	ug/L	5.0	1	10/29/10 11:20	11/01/10 22:48	7440-36-0	
Arsenic	ND	ug/L	5.0	1	10/29/10 11:20	11/01/10 22:48	7440-38-2	
Barium	**40.1**	ug/L	5.0	1	10/29/10 11:20	11/01/10 22:48	7440-39-3	
Beryllium	ND	ug/L	1.0	1	10/29/10 11:20	11/01/10 22:48	7440-41-7	
Cadmium	ND	ug/L	1.0	1	10/29/10 11:20	11/01/10 22:48	7440-43-9	
Chromium	ND	ug/L	5.0	1	10/29/10 11:20	11/01/10 22:48	7440-47-3	
Cobalt	ND	ug/L	5.0	1	10/29/10 11:20	11/01/10 22:48	7440-48-4	
Copper	ND	ug/L	5.0	1	10/29/10 11:20	11/01/10 22:48	7440-50-8	
Lead	ND	ug/L	5.0	1	10/29/10 11:20	11/01/10 22:48	7439-92-1	
Nickel	ND	ug/L	5.0	1	10/29/10 11:20	11/01/10 22:48	7440-02-0	
Selenium	ND	ug/L	10.0	1	10/29/10 11:20	11/01/10 22:48	7782-49-2	
Silver	ND	ug/L	5.0	1	10/29/10 11:20	11/01/10 22:48	7440-22-4	
Thallium	ND	ug/L	5.4	1	10/29/10 11:20	11/01/10 22:48	7440-28-0	
Vanadium	ND	ug/L	5.0	1	10/29/10 11:20	11/01/10 22:48	7440-62-2	
Zinc	ND	ug/L	10.0	1	10/29/10 11:20	11/01/10 22:48	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		10/29/10 14:13	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		10/29/10 14:13	107-13-1	
Benzene	ND	ug/L	1.0	1		10/29/10 14:13	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		10/29/10 14:13	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		10/29/10 14:13	75-27-4	
Bromoform	ND	ug/L	1.0	1		10/29/10 14:13	75-25-2	
Bromomethane	ND	ug/L	2.0	1		10/29/10 14:13	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		10/29/10 14:13	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		10/29/10 14:13	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		10/29/10 14:13	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		10/29/10 14:13	108-90-7	
Chloroethane	ND	ug/L	1.0	1		10/29/10 14:13	75-00-3	
Chloroform	ND	ug/L	1.0	1		10/29/10 14:13	67-66-3	
Chloromethane	ND	ug/L	1.0	1		10/29/10 14:13	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		10/29/10 14:13	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		10/29/10 14:13	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		10/29/10 14:13	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		10/29/10 14:13	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		10/29/10 14:13	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		10/29/10 14:13	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		10/29/10 14:13	110-57-6	

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ANALYTICAL RESULTS

Project: White Oak LF 10/26/10
Pace Project No.: 9280732

Sample: SW-6 **Lab ID: 9280732005** Collected: 10/26/10 12:00 Received: 10/27/10 08:45 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
1,1-Dichloroethane	ND	ug/L	1.0	1		10/29/10 14:13	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		10/29/10 14:13	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		10/29/10 14:13	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		10/29/10 14:13	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		10/29/10 14:13	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		10/29/10 14:13	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		10/29/10 14:13	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		10/29/10 14:13	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		10/29/10 14:13	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		10/29/10 14:13	591-78-6	
Iodomethane	ND	ug/L	5.0	1		10/29/10 14:13	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		10/29/10 14:13	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		10/29/10 14:13	108-10-1	
Styrene	ND	ug/L	1.0	1		10/29/10 14:13	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		10/29/10 14:13	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		10/29/10 14:13	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		10/29/10 14:13	127-18-4	
Toluene	ND	ug/L	1.0	1		10/29/10 14:13	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		10/29/10 14:13	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		10/29/10 14:13	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		10/29/10 14:13	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		10/29/10 14:13	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		10/29/10 14:13	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		10/29/10 14:13	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		10/29/10 14:13	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		10/29/10 14:13	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		10/29/10 14:13	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		10/29/10 14:13	95-47-6	
4-Bromofluorobenzene (S)	96	%	70-130	1		10/29/10 14:13	460-00-4	
Dibromofluoromethane (S)	102	%	70-130	1		10/29/10 14:13	1868-53-7	
1,2-Dichloroethane-d4 (S)	103	%	70-130	1		10/29/10 14:13	17060-07-0	
Toluene-d8 (S)	102	%	70-130	1		10/29/10 14:13	2037-26-5	

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ANALYTICAL RESULTS

Project: White Oak LF 10/26/10
Pace Project No.: 9280732

Sample: SW-7 **Lab ID: 9280732006** Collected: 10/26/10 11:45 Received: 10/27/10 08:45 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	**MPS**			1		11/03/10 14:00		
Collected Date	**10/26/10**			1		11/03/10 14:00		
Collected Time	**11:45**			1		11/03/10 14:00		
Field pH	**6.39**	Std. Units		1		11/03/10 14:00		
Field Temperature	**13.4**	deg C		1		11/03/10 14:00		
Field Specific Conductance	**53**	umhos/cm		1		11/03/10 14:00		
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Antimony	ND	ug/L	5.0	1	10/29/10 11:20	11/01/10 22:52	7440-36-0	
Arsenic	ND	ug/L	5.0	1	10/29/10 11:20	11/01/10 22:52	7440-38-2	
Barium	**32.9**	ug/L	5.0	1	10/29/10 11:20	11/01/10 22:52	7440-39-3	
Beryllium	ND	ug/L	1.0	1	10/29/10 11:20	11/01/10 22:52	7440-41-7	
Cadmium	ND	ug/L	1.0	1	10/29/10 11:20	11/01/10 22:52	7440-43-9	
Chromium	ND	ug/L	5.0	1	10/29/10 11:20	11/01/10 22:52	7440-47-3	
Cobalt	ND	ug/L	5.0	1	10/29/10 11:20	11/01/10 22:52	7440-48-4	
Copper	ND	ug/L	5.0	1	10/29/10 11:20	11/01/10 22:52	7440-50-8	
Lead	ND	ug/L	5.0	1	10/29/10 11:20	11/01/10 22:52	7439-92-1	
Nickel	ND	ug/L	5.0	1	10/29/10 11:20	11/01/10 22:52	7440-02-0	
Selenium	ND	ug/L	10.0	1	10/29/10 11:20	11/01/10 22:52	7782-49-2	
Silver	ND	ug/L	5.0	1	10/29/10 11:20	11/01/10 22:52	7440-22-4	
Thallium	ND	ug/L	5.4	1	10/29/10 11:20	11/01/10 22:52	7440-28-0	
Vanadium	ND	ug/L	5.0	1	10/29/10 11:20	11/01/10 22:52	7440-62-2	
Zinc	ND	ug/L	10.0	1	10/29/10 11:20	11/01/10 22:52	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		10/29/10 14:41	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		10/29/10 14:41	107-13-1	
Benzene	ND	ug/L	1.0	1		10/29/10 14:41	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		10/29/10 14:41	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		10/29/10 14:41	75-27-4	
Bromoform	ND	ug/L	1.0	1		10/29/10 14:41	75-25-2	
Bromomethane	ND	ug/L	2.0	1		10/29/10 14:41	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		10/29/10 14:41	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		10/29/10 14:41	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		10/29/10 14:41	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		10/29/10 14:41	108-90-7	
Chloroethane	ND	ug/L	1.0	1		10/29/10 14:41	75-00-3	
Chloroform	ND	ug/L	1.0	1		10/29/10 14:41	67-66-3	
Chloromethane	ND	ug/L	1.0	1		10/29/10 14:41	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		10/29/10 14:41	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		10/29/10 14:41	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		10/29/10 14:41	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		10/29/10 14:41	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		10/29/10 14:41	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		10/29/10 14:41	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		10/29/10 14:41	110-57-6	

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ANALYTICAL RESULTS

Project: White Oak LF 10/26/10
Pace Project No.: 9280732

Sample: SW-7 **Lab ID: 9280732006** Collected: 10/26/10 11:45 Received: 10/27/10 08:45 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
1,1-Dichloroethane	ND	ug/L	1.0	1		10/29/10 14:41	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		10/29/10 14:41	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		10/29/10 14:41	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		10/29/10 14:41	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		10/29/10 14:41	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		10/29/10 14:41	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		10/29/10 14:41	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		10/29/10 14:41	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		10/29/10 14:41	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		10/29/10 14:41	591-78-6	
Iodomethane	ND	ug/L	5.0	1		10/29/10 14:41	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		10/29/10 14:41	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		10/29/10 14:41	108-10-1	
Styrene	ND	ug/L	1.0	1		10/29/10 14:41	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		10/29/10 14:41	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		10/29/10 14:41	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		10/29/10 14:41	127-18-4	
Toluene	ND	ug/L	1.0	1		10/29/10 14:41	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		10/29/10 14:41	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		10/29/10 14:41	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		10/29/10 14:41	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		10/29/10 14:41	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		10/29/10 14:41	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		10/29/10 14:41	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		10/29/10 14:41	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		10/29/10 14:41	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		10/29/10 14:41	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		10/29/10 14:41	95-47-6	
4-Bromofluorobenzene (S)	96	%	70-130	1		10/29/10 14:41	460-00-4	
Dibromofluoromethane (S)	102	%	70-130	1		10/29/10 14:41	1868-53-7	
1,2-Dichloroethane-d4 (S)	105	%	70-130	1		10/29/10 14:41	17060-07-0	
Toluene-d8 (S)	104	%	70-130	1		10/29/10 14:41	2037-26-5	

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ANALYTICAL RESULTS

Project: White Oak LF 10/26/10
Pace Project No.: 9280732

Sample: Leachate **Lab ID: 9280732007** Collected: 10/26/10 16:45 Received: 10/27/10 08:45 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method:							
Collected By	**MPS**			1		11/10/10 10:59		
Collected Date	**10/26/10**			1		11/10/10 10:59		
Collected Time	**16:45**			1		11/10/10 10:59		
Field pH	**7.31**	Std. Units		1		11/10/10 10:59		
Field Temperature	**18.2**	deg C		1		11/10/10 10:59		
Field Specific Conductance	**20,400**	umhos/cm		1		11/10/10 10:59		
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Antimony	**13.9**	ug/L	5.0	1	11/04/10 11:15	11/04/10 20:47	7440-36-0	
Arsenic	**29.4**	ug/L	5.0	1	11/04/10 11:15	11/04/10 20:47	7440-38-2	
Barium	**172**	ug/L	5.0	1	11/04/10 11:15	11/04/10 20:47	7440-39-3	
Beryllium	**1.3**	ug/L	1.0	1	11/04/10 11:15	11/04/10 20:47	7440-41-7	
Cadmium	ND	ug/L	1.0	1	11/04/10 11:15	11/04/10 20:47	7440-43-9	
Chromium	**10.7**	ug/L	5.0	1	11/04/10 11:15	11/04/10 20:47	7440-47-3	
Cobalt	ND	ug/L	5.0	1	11/04/10 11:15	11/04/10 20:47	7440-48-4	
Copper	ND	ug/L	5.0	1	11/04/10 11:15	11/04/10 20:47	7440-50-8	
Lead	ND	ug/L	5.0	1	11/04/10 11:15	11/04/10 20:47	7439-92-1	
Nickel	**44.4**	ug/L	5.0	1	11/04/10 11:15	11/04/10 20:47	7440-02-0	
Selenium	**29.6**	ug/L	10.0	1	11/04/10 11:15	11/04/10 20:47	7782-49-2	
Silver	ND	ug/L	5.0	1	11/04/10 11:15	11/04/10 20:47	7440-22-4	
Thallium	ND	ug/L	10.0	1	11/04/10 11:15	11/04/10 20:47	7440-28-0	
Vanadium	**21.0**	ug/L	5.0	1	11/04/10 11:15	11/04/10 20:47	7440-62-2	
Zinc	ND	ug/L	10.0	1	11/04/10 11:15	11/04/10 20:47	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		10/29/10 15:08	67-64-1	
Benzene	**1.0**	ug/L	1.0	1		10/29/10 15:08	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		10/29/10 15:08	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		10/29/10 15:08	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		10/29/10 15:08	75-27-4	
Bromoform	ND	ug/L	1.0	1		10/29/10 15:08	75-25-2	
Bromomethane	ND	ug/L	2.0	1		10/29/10 15:08	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		10/29/10 15:08	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		10/29/10 15:08	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		10/29/10 15:08	108-90-7	
Chloroethane	ND	ug/L	1.0	1		10/29/10 15:08	75-00-3	
Chloroform	ND	ug/L	1.0	1		10/29/10 15:08	67-66-3	
Chloromethane	ND	ug/L	1.0	1		10/29/10 15:08	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		10/29/10 15:08	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		10/29/10 15:08	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		10/29/10 15:08	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		10/29/10 15:08	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		10/29/10 15:08	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		10/29/10 15:08	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		10/29/10 15:08	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		10/29/10 15:08	541-73-1	

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ANALYTICAL RESULTS

Project: White Oak LF 10/26/10
Pace Project No.: 9280732

Sample: Leachate **Lab ID: 9280732007** Collected: 10/26/10 16:45 Received: 10/27/10 08:45 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
1,4-Dichlorobenzene	**3.4**	ug/L	1.0	1		10/29/10 15:08	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		10/29/10 15:08	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		10/29/10 15:08	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		10/29/10 15:08	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		10/29/10 15:08	75-35-4	
cis-1,2-Dichloroethene	**1.2**	ug/L	1.0	1		10/29/10 15:08	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		10/29/10 15:08	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		10/29/10 15:08	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		10/29/10 15:08	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		10/29/10 15:08	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		10/29/10 15:08	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		10/29/10 15:08	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		10/29/10 15:08	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		10/29/10 15:08	108-20-3	
Ethylbenzene	**6.8**	ug/L	1.0	1		10/29/10 15:08	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		10/29/10 15:08	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		10/29/10 15:08	591-78-6	
p-Isopropyltoluene	**2.9**	ug/L	1.0	1		10/29/10 15:08	99-87-6	
Methylene Chloride	ND	ug/L	2.0	1		10/29/10 15:08	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		10/29/10 15:08	108-10-1	
Methyl-tert-butyl ether	**2.9**	ug/L	1.0	1		10/29/10 15:08	1634-04-4	
Naphthalene	**6.5**	ug/L	1.0	1		10/29/10 15:08	91-20-3	
Styrene	ND	ug/L	1.0	1		10/29/10 15:08	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		10/29/10 15:08	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		10/29/10 15:08	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		10/29/10 15:08	127-18-4	
Toluene	**8.4**	ug/L	1.0	1		10/29/10 15:08	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		10/29/10 15:08	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		10/29/10 15:08	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		10/29/10 15:08	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		10/29/10 15:08	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		10/29/10 15:08	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		10/29/10 15:08	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		10/29/10 15:08	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		10/29/10 15:08	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		10/29/10 15:08	75-01-4	
m&p-Xylene	**10.9**	ug/L	2.0	1		10/29/10 15:08	179601-23-1	
o-Xylene	**5.7**	ug/L	1.0	1		10/29/10 15:08	95-47-6	
4-Bromofluorobenzene (S)	98	%	70-130	1		10/29/10 15:08	460-00-4	
Dibromofluoromethane (S)	95	%	70-130	1		10/29/10 15:08	1868-53-7	
1,2-Dichloroethane-d4 (S)	101	%	70-130	1		10/29/10 15:08	17060-07-0	
Toluene-d8 (S)	83	%	70-130	1		10/29/10 15:08	2037-26-5	
5210B BOD, 5 day	Analytical Method: SM 5210B							
BOD, 5 day	**40.0**	mg/L	2.0	1	10/27/10 21:05	11/01/10 13:38		B2

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ANALYTICAL RESULTS

Project: White Oak LF 10/26/10
Pace Project No.: 9280732

Sample: Leachate **Lab ID: 9280732007** Collected: 10/26/10 16:45 Received: 10/27/10 08:45 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Sulfate	**7670**	mg/L	1000	200		11/11/10 14:28	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2							
Nitrogen, Nitrate	**5.5**	mg/L	0.10	1		10/28/10 01:00		
Nitrogen, Nitrite	**0.51**	mg/L	0.10	1		10/28/10 01:00		
Nitrogen, NO2 plus NO3	**6.0**	mg/L	0.10	1		10/28/10 01:00		
365.1 Phosphorus, Total	Analytical Method: EPA 365.1							
Phosphorus	**1.4**	mg/L	0.10	1		11/07/10 14:51	7723-14-0	
5220D COD	Analytical Method: SM 5220D							
Chemical Oxygen Demand	**926**	mg/L	50.0	1		11/09/10 16:15		

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ANALYTICAL RESULTS

Project: White Oak LF 10/26/10
Pace Project No.: 9280732

Sample: MW-1A **Lab ID: 9280732008** Collected: 10/27/10 12:00 Received: 10/27/10 16:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	**MPS**			1		11/10/10 10:58		
Collected Date	**10/27/10**			1		11/10/10 10:58		
Collected Time	**12:00**			1		11/10/10 10:58		
Field pH	**5.69**	Std. Units		1		11/10/10 10:58		
Field Temperature	**13.9**	deg C		1		11/10/10 10:58		
Static Water Level	**20.34**	feet		1		11/10/10 10:58		
Field Specific Conductance	**113**	umhos/cm		1		11/10/10 10:58		
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Antimony	ND	ug/L	5.0	1	10/29/10 11:20	11/02/10 03:29	7440-36-0	
Arsenic	ND	ug/L	5.0	1	10/29/10 11:20	11/02/10 03:29	7440-38-2	
Barium	**178**	ug/L	5.0	1	10/29/10 11:20	11/02/10 03:29	7440-39-3	
Beryllium	ND	ug/L	1.0	1	10/29/10 11:20	11/02/10 03:29	7440-41-7	
Cadmium	ND	ug/L	1.0	1	10/29/10 11:20	11/02/10 03:29	7440-43-9	
Chromium	**7.1**	ug/L	5.0	1	10/29/10 11:20	11/02/10 03:29	7440-47-3	
Cobalt	ND	ug/L	5.0	1	10/29/10 11:20	11/02/10 03:29	7440-48-4	
Copper	ND	ug/L	5.0	1	10/29/10 11:20	11/02/10 03:29	7440-50-8	
Lead	ND	ug/L	5.0	1	10/29/10 11:20	11/02/10 03:29	7439-92-1	
Nickel	ND	ug/L	5.0	1	10/29/10 11:20	11/02/10 03:29	7440-02-0	
Selenium	ND	ug/L	10.0	1	10/29/10 11:20	11/02/10 03:29	7782-49-2	
Silver	ND	ug/L	5.0	1	10/29/10 11:20	11/02/10 03:29	7440-22-4	
Thallium	ND	ug/L	5.4	1	10/29/10 11:20	11/03/10 02:20	7440-28-0	
Vanadium	**6.9**	ug/L	5.0	1	10/29/10 11:20	11/02/10 03:29	7440-62-2	
Zinc	**15.0**	ug/L	10.0	1	10/29/10 11:20	11/02/10 03:29	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		10/29/10 15:34	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		10/29/10 15:34	107-13-1	
Benzene	ND	ug/L	1.0	1		10/29/10 15:34	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		10/29/10 15:34	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		10/29/10 15:34	75-27-4	
Bromoform	ND	ug/L	1.0	1		10/29/10 15:34	75-25-2	
Bromomethane	ND	ug/L	2.0	1		10/29/10 15:34	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		10/29/10 15:34	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		10/29/10 15:34	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		10/29/10 15:34	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		10/29/10 15:34	108-90-7	
Chloroethane	ND	ug/L	1.0	1		10/29/10 15:34	75-00-3	
Chloroform	ND	ug/L	1.0	1		10/29/10 15:34	67-66-3	
Chloromethane	ND	ug/L	1.0	1		10/29/10 15:34	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		10/29/10 15:34	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		10/29/10 15:34	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		10/29/10 15:34	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		10/29/10 15:34	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		10/29/10 15:34	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		10/29/10 15:34	106-46-7	

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ANALYTICAL RESULTS

Project: White Oak LF 10/26/10
Pace Project No.: 9280732

Sample: MW-1A **Lab ID: 9280732008** Collected: 10/27/10 12:00 Received: 10/27/10 16:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		10/29/10 15:34	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		10/29/10 15:34	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		10/29/10 15:34	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		10/29/10 15:34	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		10/29/10 15:34	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		10/29/10 15:34	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		10/29/10 15:34	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		10/29/10 15:34	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		10/29/10 15:34	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		10/29/10 15:34	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		10/29/10 15:34	591-78-6	
Iodomethane	ND	ug/L	5.0	1		10/29/10 15:34	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		10/29/10 15:34	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		10/29/10 15:34	108-10-1	
Styrene	ND	ug/L	1.0	1		10/29/10 15:34	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		10/29/10 15:34	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		10/29/10 15:34	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		10/29/10 15:34	127-18-4	
Toluene	ND	ug/L	1.0	1		10/29/10 15:34	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		10/29/10 15:34	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		10/29/10 15:34	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		10/29/10 15:34	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		10/29/10 15:34	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		10/29/10 15:34	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		10/29/10 15:34	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		10/29/10 15:34	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		10/29/10 15:34	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		10/29/10 15:34	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		10/29/10 15:34	95-47-6	
4-Bromofluorobenzene (S)	90	%	70-130	1		10/29/10 15:34	460-00-4	
Dibromofluoromethane (S)	100	%	70-130	1		10/29/10 15:34	1868-53-7	
1,2-Dichloroethane-d4 (S)	103	%	70-130	1		10/29/10 15:34	17060-07-0	
Toluene-d8 (S)	101	%	70-130	1		10/29/10 15:34	2037-26-5	

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ANALYTICAL RESULTS

Project: White Oak LF 10/26/10
Pace Project No.: 9280732

Sample: MW-2 **Lab ID: 9280732009** Collected: 10/27/10 12:10 Received: 10/27/10 16:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	**MPS**			1		11/10/10 10:41		
Collected Date	**10/27/10**			1		11/10/10 10:41		
Collected Time	**12:10**			1		11/10/10 10:41		
Field pH	**5.72**	Std. Units		1		11/10/10 10:41		
Field Temperature	**13.9**	deg C		1		11/10/10 10:41		
Static Water Level	**31.06**	feet		1		11/10/10 10:41		
Field Specific Conductance	**189**	umhos/cm		1		11/10/10 10:41		
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Antimony	ND	ug/L	5.0	1	10/29/10 11:20	11/02/10 03:33	7440-36-0	
Arsenic	**5.4**	ug/L	5.0	1	10/29/10 11:20	11/02/10 03:33	7440-38-2	
Barium	**1760**	ug/L	5.0	1	10/29/10 11:20	11/02/10 03:33	7440-39-3	
Beryllium	ND	ug/L	1.0	1	10/29/10 11:20	11/02/10 03:33	7440-41-7	
Cadmium	ND	ug/L	1.0	1	10/29/10 11:20	11/02/10 03:33	7440-43-9	
Chromium	ND	ug/L	5.0	1	10/29/10 11:20	11/02/10 03:33	7440-47-3	
Cobalt	ND	ug/L	5.0	1	10/29/10 11:20	11/02/10 03:33	7440-48-4	
Copper	ND	ug/L	5.0	1	10/29/10 11:20	11/02/10 03:33	7440-50-8	
Lead	ND	ug/L	5.0	1	10/29/10 11:20	11/02/10 03:33	7439-92-1	
Nickel	**7.4**	ug/L	5.0	1	10/29/10 11:20	11/02/10 03:33	7440-02-0	
Selenium	ND	ug/L	10.0	1	10/29/10 11:20	11/02/10 03:33	7782-49-2	
Silver	ND	ug/L	5.0	1	10/29/10 11:20	11/02/10 03:33	7440-22-4	
Thallium	ND	ug/L	5.4	1	10/29/10 11:20	11/03/10 02:24	7440-28-0	
Vanadium	ND	ug/L	5.0	1	10/29/10 11:20	11/02/10 03:33	7440-62-2	
Zinc	ND	ug/L	10.0	1	10/29/10 11:20	11/02/10 03:33	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		10/29/10 15:59	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		10/29/10 15:59	107-13-1	
Benzene	ND	ug/L	1.0	1		10/29/10 15:59	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		10/29/10 15:59	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		10/29/10 15:59	75-27-4	
Bromoform	ND	ug/L	1.0	1		10/29/10 15:59	75-25-2	
Bromomethane	ND	ug/L	2.0	1		10/29/10 15:59	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		10/29/10 15:59	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		10/29/10 15:59	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		10/29/10 15:59	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		10/29/10 15:59	108-90-7	
Chloroethane	ND	ug/L	1.0	1		10/29/10 15:59	75-00-3	
Chloroform	ND	ug/L	1.0	1		10/29/10 15:59	67-66-3	
Chloromethane	ND	ug/L	1.0	1		10/29/10 15:59	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		10/29/10 15:59	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		10/29/10 15:59	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		10/29/10 15:59	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		10/29/10 15:59	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		10/29/10 15:59	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		10/29/10 15:59	106-46-7	

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ANALYTICAL RESULTS

Project: White Oak LF 10/26/10
Pace Project No.: 9280732

Sample: MW-2 **Lab ID: 9280732009** Collected: 10/27/10 12:10 Received: 10/27/10 16:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		10/29/10 15:59	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		10/29/10 15:59	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		10/29/10 15:59	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		10/29/10 15:59	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		10/29/10 15:59	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		10/29/10 15:59	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		10/29/10 15:59	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		10/29/10 15:59	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		10/29/10 15:59	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		10/29/10 15:59	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		10/29/10 15:59	591-78-6	
Iodomethane	ND	ug/L	5.0	1		10/29/10 15:59	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		10/29/10 15:59	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		10/29/10 15:59	108-10-1	
Styrene	ND	ug/L	1.0	1		10/29/10 15:59	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		10/29/10 15:59	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		10/29/10 15:59	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		10/29/10 15:59	127-18-4	
Toluene	ND	ug/L	1.0	1		10/29/10 15:59	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		10/29/10 15:59	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		10/29/10 15:59	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		10/29/10 15:59	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		10/29/10 15:59	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		10/29/10 15:59	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		10/29/10 15:59	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		10/29/10 15:59	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		10/29/10 15:59	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		10/29/10 15:59	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		10/29/10 15:59	95-47-6	
4-Bromofluorobenzene (S)	91	%	70-130	1		10/29/10 15:59	460-00-4	
Dibromofluoromethane (S)	96	%	70-130	1		10/29/10 15:59	1868-53-7	
1,2-Dichloroethane-d4 (S)	105	%	70-130	1		10/29/10 15:59	17060-07-0	
Toluene-d8 (S)	98	%	70-130	1		10/29/10 15:59	2037-26-5	

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ANALYTICAL RESULTS

Project: White Oak LF 10/26/10
Pace Project No.: 9280732

Sample: MW-2D **Lab ID: 9280732010** Collected: 10/27/10 12:15 Received: 10/27/10 16:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	**MPS**			1		11/10/10 10:43		
Collected Date	**10/27/10**			1		11/10/10 10:43		
Collected Time	**12:15**			1		11/10/10 10:43		
Field pH	**5.96**	Std. Units		1		11/10/10 10:43		
Field Temperature	**14.7**	deg C		1		11/10/10 10:43		
Static Water Level	**31.05**	feet		1		11/10/10 10:43		
Field Specific Conductance	**177**	umhos/cm		1		11/10/10 10:43		
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Antimony	ND	ug/L	5.0	1	10/29/10 11:20	11/02/10 03:37	7440-36-0	
Arsenic	**5.9**	ug/L	5.0	1	10/29/10 11:20	11/02/10 03:37	7440-38-2	
Barium	**1550**	ug/L	5.0	1	10/29/10 11:20	11/02/10 03:37	7440-39-3	
Beryllium	ND	ug/L	1.0	1	10/29/10 11:20	11/02/10 03:37	7440-41-7	
Cadmium	ND	ug/L	1.0	1	10/29/10 11:20	11/02/10 03:37	7440-43-9	
Chromium	ND	ug/L	5.0	1	10/29/10 11:20	11/02/10 03:37	7440-47-3	
Cobalt	ND	ug/L	5.0	1	10/29/10 11:20	11/02/10 03:37	7440-48-4	
Copper	ND	ug/L	5.0	1	10/29/10 11:20	11/02/10 03:37	7440-50-8	
Lead	ND	ug/L	5.0	1	10/29/10 11:20	11/02/10 03:37	7439-92-1	
Nickel	ND	ug/L	5.0	1	10/29/10 11:20	11/02/10 03:37	7440-02-0	
Selenium	ND	ug/L	10.0	1	10/29/10 11:20	11/02/10 03:37	7782-49-2	
Silver	ND	ug/L	5.0	1	10/29/10 11:20	11/02/10 03:37	7440-22-4	
Thallium	ND	ug/L	5.4	1	10/29/10 11:20	11/03/10 02:27	7440-28-0	
Vanadium	ND	ug/L	5.0	1	10/29/10 11:20	11/02/10 03:37	7440-62-2	
Zinc	ND	ug/L	10.0	1	10/29/10 11:20	11/02/10 03:37	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		10/29/10 16:25	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		10/29/10 16:25	107-13-1	
Benzene	ND	ug/L	1.0	1		10/29/10 16:25	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		10/29/10 16:25	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		10/29/10 16:25	75-27-4	
Bromoform	ND	ug/L	1.0	1		10/29/10 16:25	75-25-2	
Bromomethane	ND	ug/L	2.0	1		10/29/10 16:25	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		10/29/10 16:25	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		10/29/10 16:25	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		10/29/10 16:25	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		10/29/10 16:25	108-90-7	
Chloroethane	ND	ug/L	1.0	1		10/29/10 16:25	75-00-3	
Chloroform	ND	ug/L	1.0	1		10/29/10 16:25	67-66-3	
Chloromethane	ND	ug/L	1.0	1		10/29/10 16:25	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		10/29/10 16:25	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		10/29/10 16:25	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		10/29/10 16:25	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		10/29/10 16:25	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		10/29/10 16:25	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		10/29/10 16:25	106-46-7	

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ANALYTICAL RESULTS

Project: White Oak LF 10/26/10
Pace Project No.: 9280732

Sample: MW-2D **Lab ID: 9280732010** Collected: 10/27/10 12:15 Received: 10/27/10 16:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		10/29/10 16:25	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		10/29/10 16:25	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		10/29/10 16:25	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		10/29/10 16:25	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		10/29/10 16:25	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		10/29/10 16:25	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		10/29/10 16:25	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		10/29/10 16:25	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		10/29/10 16:25	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		10/29/10 16:25	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		10/29/10 16:25	591-78-6	
Iodomethane	ND	ug/L	5.0	1		10/29/10 16:25	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		10/29/10 16:25	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		10/29/10 16:25	108-10-1	
Styrene	ND	ug/L	1.0	1		10/29/10 16:25	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		10/29/10 16:25	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		10/29/10 16:25	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		10/29/10 16:25	127-18-4	
Toluene	ND	ug/L	1.0	1		10/29/10 16:25	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		10/29/10 16:25	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		10/29/10 16:25	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		10/29/10 16:25	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		10/29/10 16:25	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		10/29/10 16:25	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		10/29/10 16:25	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		10/29/10 16:25	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		10/29/10 16:25	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		10/29/10 16:25	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		10/29/10 16:25	95-47-6	
4-Bromofluorobenzene (S)	95	%	70-130	1		10/29/10 16:25	460-00-4	
Dibromofluoromethane (S)	99	%	70-130	1		10/29/10 16:25	1868-53-7	
1,2-Dichloroethane-d4 (S)	101	%	70-130	1		10/29/10 16:25	17060-07-0	
Toluene-d8 (S)	100	%	70-130	1		10/29/10 16:25	2037-26-5	

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ANALYTICAL RESULTS

Project: White Oak LF 10/26/10
Pace Project No.: 9280732

Sample: MW-3R **Lab ID: 9280732011** Collected: 10/27/10 12:25 Received: 10/27/10 16:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	**MPS**			1		11/10/10 10:44		
Collected Date	**10/27/10**			1		11/10/10 10:44		
Collected Time	**12:25**			1		11/10/10 10:44		
Field pH	**5.43**	Std. Units		1		11/10/10 10:44		
Field Temperature	**15.2**	deg C		1		11/10/10 10:44		
Static Water Level	**34.66**	feet		1		11/10/10 10:44		
Field Specific Conductance	**418**	umhos/cm		1		11/10/10 10:44		
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Antimony	ND	ug/L	5.0	1	10/29/10 11:20	11/02/10 03:42	7440-36-0	
Arsenic	ND	ug/L	5.0	1	10/29/10 11:20	11/02/10 03:42	7440-38-2	
Barium	**531**	ug/L	5.0	1	10/29/10 11:20	11/02/10 03:42	7440-39-3	
Beryllium	ND	ug/L	1.0	1	10/29/10 11:20	11/02/10 03:42	7440-41-7	
Cadmium	ND	ug/L	1.0	1	10/29/10 11:20	11/02/10 03:42	7440-43-9	
Chromium	**12.0**	ug/L	5.0	1	10/29/10 11:20	11/02/10 03:42	7440-47-3	
Cobalt	**17.3**	ug/L	5.0	1	10/29/10 11:20	11/02/10 03:42	7440-48-4	
Copper	ND	ug/L	5.0	1	10/29/10 11:20	11/02/10 03:42	7440-50-8	
Lead	ND	ug/L	5.0	1	10/29/10 11:20	11/02/10 03:42	7439-92-1	
Nickel	**21.5**	ug/L	5.0	1	10/29/10 11:20	11/02/10 03:42	7440-02-0	
Selenium	ND	ug/L	10.0	1	10/29/10 11:20	11/02/10 03:42	7782-49-2	
Silver	ND	ug/L	5.0	1	10/29/10 11:20	11/02/10 03:42	7440-22-4	
Thallium	ND	ug/L	5.4	1	10/29/10 11:20	11/03/10 02:31	7440-28-0	
Vanadium	**14.2**	ug/L	5.0	1	10/29/10 11:20	11/02/10 03:42	7440-62-2	
Zinc	**32.4**	ug/L	10.0	1	10/29/10 11:20	11/02/10 03:42	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		10/29/10 16:50	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		10/29/10 16:50	107-13-1	
Benzene	ND	ug/L	1.0	1		10/29/10 16:50	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		10/29/10 16:50	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		10/29/10 16:50	75-27-4	
Bromoform	ND	ug/L	1.0	1		10/29/10 16:50	75-25-2	
Bromomethane	ND	ug/L	2.0	1		10/29/10 16:50	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		10/29/10 16:50	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		10/29/10 16:50	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		10/29/10 16:50	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		10/29/10 16:50	108-90-7	
Chloroethane	ND	ug/L	1.0	1		10/29/10 16:50	75-00-3	
Chloroform	ND	ug/L	1.0	1		10/29/10 16:50	67-66-3	
Chloromethane	ND	ug/L	1.0	1		10/29/10 16:50	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		10/29/10 16:50	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		10/29/10 16:50	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		10/29/10 16:50	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		10/29/10 16:50	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		10/29/10 16:50	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		10/29/10 16:50	106-46-7	

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ANALYTICAL RESULTS

Project: White Oak LF 10/26/10
Pace Project No.: 9280732

Sample: MW-3R **Lab ID: 9280732011** Collected: 10/27/10 12:25 Received: 10/27/10 16:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		10/29/10 16:50	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		10/29/10 16:50	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		10/29/10 16:50	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		10/29/10 16:50	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		10/29/10 16:50	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		10/29/10 16:50	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		10/29/10 16:50	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		10/29/10 16:50	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		10/29/10 16:50	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		10/29/10 16:50	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		10/29/10 16:50	591-78-6	
Iodomethane	ND	ug/L	5.0	1		10/29/10 16:50	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		10/29/10 16:50	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		10/29/10 16:50	108-10-1	
Styrene	ND	ug/L	1.0	1		10/29/10 16:50	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		10/29/10 16:50	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		10/29/10 16:50	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		10/29/10 16:50	127-18-4	
Toluene	ND	ug/L	1.0	1		10/29/10 16:50	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		10/29/10 16:50	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		10/29/10 16:50	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		10/29/10 16:50	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		10/29/10 16:50	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		10/29/10 16:50	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		10/29/10 16:50	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		10/29/10 16:50	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		10/29/10 16:50	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		10/29/10 16:50	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		10/29/10 16:50	95-47-6	
4-Bromofluorobenzene (S)	96	%	70-130	1		10/29/10 16:50	460-00-4	
Dibromofluoromethane (S)	101	%	70-130	1		10/29/10 16:50	1868-53-7	
1,2-Dichloroethane-d4 (S)	101	%	70-130	1		10/29/10 16:50	17060-07-0	
Toluene-d8 (S)	104	%	70-130	1		10/29/10 16:50	2037-26-5	

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ANALYTICAL RESULTS

Project: White Oak LF 10/26/10
Pace Project No.: 9280732

Sample: MW-3DR **Lab ID: 9280732012** Collected: 10/27/10 12:35 Received: 10/27/10 16:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	**MPS**			1		11/10/10 10:46		
Collected Date	**10/27/10**			1		11/10/10 10:46		
Collected Time	**12:35**			1		11/10/10 10:46		
Field pH	**5.65**	Std. Units		1		11/10/10 10:46		
Field Temperature	**15.0**	deg C		1		11/10/10 10:46		
Static Water Level	**38.12**	feet		1		11/10/10 10:46		
Field Specific Conductance	**317**	umhos/cm		1		11/10/10 10:46		
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Antimony	ND	ug/L	5.0	1	10/29/10 11:20	11/02/10 03:47	7440-36-0	
Arsenic	ND	ug/L	5.0	1	10/29/10 11:20	11/02/10 03:47	7440-38-2	
Barium	**234**	ug/L	5.0	1	10/29/10 11:20	11/02/10 03:47	7440-39-3	
Beryllium	ND	ug/L	1.0	1	10/29/10 11:20	11/02/10 03:47	7440-41-7	
Cadmium	ND	ug/L	1.0	1	10/29/10 11:20	11/02/10 03:47	7440-43-9	
Chromium	**9.2**	ug/L	5.0	1	10/29/10 11:20	11/02/10 03:47	7440-47-3	
Cobalt	**5.6**	ug/L	5.0	1	10/29/10 11:20	11/02/10 03:47	7440-48-4	
Copper	**12.4**	ug/L	5.0	1	10/29/10 11:20	11/02/10 03:47	7440-50-8	
Lead	ND	ug/L	5.0	1	10/29/10 11:20	11/02/10 03:47	7439-92-1	
Nickel	**19.0**	ug/L	5.0	1	10/29/10 11:20	11/02/10 03:47	7440-02-0	
Selenium	ND	ug/L	10.0	1	10/29/10 11:20	11/02/10 03:47	7782-49-2	
Silver	ND	ug/L	5.0	1	10/29/10 11:20	11/02/10 03:47	7440-22-4	
Thallium	ND	ug/L	5.4	1	10/29/10 11:20	11/03/10 02:35	7440-28-0	
Vanadium	**7.1**	ug/L	5.0	1	10/29/10 11:20	11/02/10 03:47	7440-62-2	
Zinc	**16.3**	ug/L	10.0	1	10/29/10 11:20	11/02/10 03:47	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		10/29/10 17:16	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		10/29/10 17:16	107-13-1	
Benzene	ND	ug/L	1.0	1		10/29/10 17:16	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		10/29/10 17:16	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		10/29/10 17:16	75-27-4	
Bromoform	ND	ug/L	1.0	1		10/29/10 17:16	75-25-2	
Bromomethane	ND	ug/L	2.0	1		10/29/10 17:16	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		10/29/10 17:16	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		10/29/10 17:16	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		10/29/10 17:16	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		10/29/10 17:16	108-90-7	
Chloroethane	ND	ug/L	1.0	1		10/29/10 17:16	75-00-3	
Chloroform	ND	ug/L	1.0	1		10/29/10 17:16	67-66-3	
Chloromethane	ND	ug/L	1.0	1		10/29/10 17:16	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		10/29/10 17:16	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		10/29/10 17:16	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		10/29/10 17:16	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		10/29/10 17:16	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		10/29/10 17:16	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		10/29/10 17:16	106-46-7	

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ANALYTICAL RESULTS

Project: White Oak LF 10/26/10
Pace Project No.: 9280732

Sample: MW-3DR **Lab ID: 9280732012** Collected: 10/27/10 12:35 Received: 10/27/10 16:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		10/29/10 17:16	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		10/29/10 17:16	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		10/29/10 17:16	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		10/29/10 17:16	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		10/29/10 17:16	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		10/29/10 17:16	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		10/29/10 17:16	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		10/29/10 17:16	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		10/29/10 17:16	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		10/29/10 17:16	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		10/29/10 17:16	591-78-6	
Iodomethane	ND	ug/L	5.0	1		10/29/10 17:16	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		10/29/10 17:16	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		10/29/10 17:16	108-10-1	
Styrene	ND	ug/L	1.0	1		10/29/10 17:16	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		10/29/10 17:16	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		10/29/10 17:16	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		10/29/10 17:16	127-18-4	
Toluene	ND	ug/L	1.0	1		10/29/10 17:16	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		10/29/10 17:16	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		10/29/10 17:16	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		10/29/10 17:16	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		10/29/10 17:16	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		10/29/10 17:16	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		10/29/10 17:16	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		10/29/10 17:16	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		10/29/10 17:16	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		10/29/10 17:16	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		10/29/10 17:16	95-47-6	
4-Bromofluorobenzene (S)	101	%	70-130	1		10/29/10 17:16	460-00-4	
Dibromofluoromethane (S)	102	%	70-130	1		10/29/10 17:16	1868-53-7	
1,2-Dichloroethane-d4 (S)	104	%	70-130	1		10/29/10 17:16	17060-07-0	
Toluene-d8 (S)	102	%	70-130	1		10/29/10 17:16	2037-26-5	

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ANALYTICAL RESULTS

Project: White Oak LF 10/26/10
Pace Project No.: 9280732

Sample: MW-4A **Lab ID: 9280732013** Collected: 10/27/10 13:10 Received: 10/27/10 16:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	**MPS**			1		11/10/10 10:47		
Collected Date	**10/27/10**			1		11/10/10 10:47		
Collected Time	**13:10**			1		11/10/10 10:47		
Field pH	**7.36**	Std. Units		1		11/10/10 10:47		
Field Temperature	**15.7**	deg C		1		11/10/10 10:47		
Static Water Level	**46.38**	feet		1		11/10/10 10:47		
Field Specific Conductance	**140**	umhos/cm		1		11/10/10 10:47		
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Antimony	ND	ug/L	5.0	1	10/29/10 11:20	11/02/10 03:50	7440-36-0	
Arsenic	ND	ug/L	5.0	1	10/29/10 11:20	11/02/10 03:50	7440-38-2	
Barium	**20.0**	ug/L	5.0	1	10/29/10 11:20	11/02/10 03:50	7440-39-3	
Beryllium	ND	ug/L	1.0	1	10/29/10 11:20	11/02/10 03:50	7440-41-7	
Cadmium	ND	ug/L	1.0	1	10/29/10 11:20	11/02/10 03:50	7440-43-9	
Chromium	ND	ug/L	5.0	1	10/29/10 11:20	11/02/10 03:50	7440-47-3	
Cobalt	ND	ug/L	5.0	1	10/29/10 11:20	11/02/10 03:50	7440-48-4	
Copper	ND	ug/L	5.0	1	10/29/10 11:20	11/02/10 03:50	7440-50-8	
Lead	ND	ug/L	5.0	1	10/29/10 11:20	11/02/10 03:50	7439-92-1	
Nickel	ND	ug/L	5.0	1	10/29/10 11:20	11/02/10 03:50	7440-02-0	
Selenium	ND	ug/L	10.0	1	10/29/10 11:20	11/02/10 03:50	7782-49-2	
Silver	ND	ug/L	5.0	1	10/29/10 11:20	11/02/10 03:50	7440-22-4	
Thallium	ND	ug/L	5.4	1	10/29/10 11:20	11/03/10 02:38	7440-28-0	
Vanadium	ND	ug/L	5.0	1	10/29/10 11:20	11/02/10 03:50	7440-62-2	
Zinc	ND	ug/L	10.0	1	10/29/10 11:20	11/02/10 03:50	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		10/31/10 11:24	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		10/31/10 11:24	107-13-1	
Benzene	ND	ug/L	1.0	1		10/31/10 11:24	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		10/31/10 11:24	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		10/31/10 11:24	75-27-4	
Bromoform	ND	ug/L	1.0	1		10/31/10 11:24	75-25-2	
Bromomethane	ND	ug/L	2.0	1		10/31/10 11:24	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		10/31/10 11:24	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		10/31/10 11:24	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		10/31/10 11:24	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		10/31/10 11:24	108-90-7	
Chloroethane	ND	ug/L	1.0	1		10/31/10 11:24	75-00-3	
Chloroform	ND	ug/L	1.0	1		10/31/10 11:24	67-66-3	
Chloromethane	ND	ug/L	1.0	1		10/31/10 11:24	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		10/31/10 11:24	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		10/31/10 11:24	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		10/31/10 11:24	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		10/31/10 11:24	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		10/31/10 11:24	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		10/31/10 11:24	106-46-7	

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ANALYTICAL RESULTS

Project: White Oak LF 10/26/10
Pace Project No.: 9280732

Sample: MW-4A **Lab ID: 9280732013** Collected: 10/27/10 13:10 Received: 10/27/10 16:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		10/31/10 11:24	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		10/31/10 11:24	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		10/31/10 11:24	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		10/31/10 11:24	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		10/31/10 11:24	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		10/31/10 11:24	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		10/31/10 11:24	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		10/31/10 11:24	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		10/31/10 11:24	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		10/31/10 11:24	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		10/31/10 11:24	591-78-6	
Iodomethane	ND	ug/L	5.0	1		10/31/10 11:24	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		10/31/10 11:24	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		10/31/10 11:24	108-10-1	
Styrene	ND	ug/L	1.0	1		10/31/10 11:24	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		10/31/10 11:24	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		10/31/10 11:24	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		10/31/10 11:24	127-18-4	
Toluene	ND	ug/L	1.0	1		10/31/10 11:24	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		10/31/10 11:24	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		10/31/10 11:24	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		10/31/10 11:24	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		10/31/10 11:24	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		10/31/10 11:24	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		10/31/10 11:24	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		10/31/10 11:24	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		10/31/10 11:24	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		10/31/10 11:24	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		10/31/10 11:24	95-47-6	
4-Bromofluorobenzene (S)	94	%	70-130	1		10/31/10 11:24	460-00-4	
Dibromofluoromethane (S)	99	%	70-130	1		10/31/10 11:24	1868-53-7	
1,2-Dichloroethane-d4 (S)	108	%	70-130	1		10/31/10 11:24	17060-07-0	
Toluene-d8 (S)	98	%	70-130	1		10/31/10 11:24	2037-26-5	

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ANALYTICAL RESULTS

Project: White Oak LF 10/26/10
Pace Project No.: 9280732

Sample: MW-8 **Lab ID: 9280732014** Collected: 10/27/10 13:25 Received: 10/27/10 16:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	**MPS**			1		11/10/10 10:48		
Collected Date	**10/27/10**			1		11/10/10 10:48		
Collected Time	**13:25**			1		11/10/10 10:48		
Field pH	**5.29**	Std. Units		1		11/10/10 10:48		
Field Temperature	**14.7**	deg C		1		11/10/10 10:48		
Static Water Level	**31.54**	feet		1		11/10/10 10:48		
Field Specific Conductance	**772**	umhos/cm		1		11/10/10 10:48		
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Antimony	ND	ug/L	5.0	1	11/05/10 11:30	11/08/10 18:27	7440-36-0	
Arsenic	ND	ug/L	5.0	1	11/05/10 11:30	11/08/10 18:27	7440-38-2	
Barium	**190**	ug/L	5.0	1	11/05/10 11:30	11/08/10 18:27	7440-39-3	
Beryllium	ND	ug/L	1.0	1	11/05/10 11:30	11/08/10 18:27	7440-41-7	
Cadmium	ND	ug/L	1.0	1	11/05/10 11:30	11/08/10 18:27	7440-43-9	
Chromium	ND	ug/L	5.0	1	11/05/10 11:30	11/08/10 18:27	7440-47-3	
Cobalt	ND	ug/L	5.0	1	11/05/10 11:30	11/08/10 18:27	7440-48-4	
Copper	ND	ug/L	5.0	1	11/05/10 11:30	11/08/10 18:27	7440-50-8	
Lead	ND	ug/L	5.0	1	11/05/10 11:30	11/08/10 18:27	7439-92-1	
Nickel	ND	ug/L	5.0	1	11/05/10 11:30	11/08/10 18:27	7440-02-0	
Selenium	ND	ug/L	10.0	1	11/05/10 11:30	11/08/10 18:27	7782-49-2	
Silver	ND	ug/L	5.0	1	11/05/10 11:30	11/08/10 18:27	7440-22-4	
Thallium	ND	ug/L	5.4	1	11/05/10 11:30	11/08/10 18:27	7440-28-0	
Vanadium	ND	ug/L	5.0	1	11/05/10 11:30	11/08/10 18:27	7440-62-2	
Zinc	ND	ug/L	10.0	1	11/05/10 11:30	11/08/10 18:27	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		10/31/10 11:50	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		10/31/10 11:50	107-13-1	
Benzene	ND	ug/L	1.0	1		10/31/10 11:50	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		10/31/10 11:50	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		10/31/10 11:50	75-27-4	
Bromoform	ND	ug/L	1.0	1		10/31/10 11:50	75-25-2	
Bromomethane	ND	ug/L	2.0	1		10/31/10 11:50	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		10/31/10 11:50	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		10/31/10 11:50	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		10/31/10 11:50	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		10/31/10 11:50	108-90-7	
Chloroethane	ND	ug/L	1.0	1		10/31/10 11:50	75-00-3	
Chloroform	ND	ug/L	1.0	1		10/31/10 11:50	67-66-3	
Chloromethane	ND	ug/L	1.0	1		10/31/10 11:50	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		10/31/10 11:50	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		10/31/10 11:50	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		10/31/10 11:50	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		10/31/10 11:50	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		10/31/10 11:50	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		10/31/10 11:50	106-46-7	

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ANALYTICAL RESULTS

Project: White Oak LF 10/26/10
Pace Project No.: 9280732

Sample: MW-8 **Lab ID: 9280732014** Collected: 10/27/10 13:25 Received: 10/27/10 16:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		10/31/10 11:50	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		10/31/10 11:50	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		10/31/10 11:50	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		10/31/10 11:50	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		10/31/10 11:50	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		10/31/10 11:50	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		10/31/10 11:50	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		10/31/10 11:50	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		10/31/10 11:50	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		10/31/10 11:50	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		10/31/10 11:50	591-78-6	
Iodomethane	ND	ug/L	5.0	1		10/31/10 11:50	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		10/31/10 11:50	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		10/31/10 11:50	108-10-1	
Styrene	ND	ug/L	1.0	1		10/31/10 11:50	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		10/31/10 11:50	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		10/31/10 11:50	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		10/31/10 11:50	127-18-4	
Toluene	ND	ug/L	1.0	1		10/31/10 11:50	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		10/31/10 11:50	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		10/31/10 11:50	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		10/31/10 11:50	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		10/31/10 11:50	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		10/31/10 11:50	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		10/31/10 11:50	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		10/31/10 11:50	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		10/31/10 11:50	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		10/31/10 11:50	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		10/31/10 11:50	95-47-6	
4-Bromofluorobenzene (S)	93	%	70-130	1		10/31/10 11:50	460-00-4	
Dibromofluoromethane (S)	108	%	70-130	1		10/31/10 11:50	1868-53-7	
1,2-Dichloroethane-d4 (S)	112	%	70-130	1		10/31/10 11:50	17060-07-0	
Toluene-d8 (S)	101	%	70-130	1		10/31/10 11:50	2037-26-5	

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ANALYTICAL RESULTS

Project: White Oak LF 10/26/10
Pace Project No.: 9280732

Sample: MW-11S **Lab ID: 9280732015** Collected: 10/27/10 13:45 Received: 10/27/10 16:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	**MPS**			1		11/10/10 10:52		
Collected Date	**10/27/10**			1		11/10/10 10:52		
Collected Time	**13:45**			1		11/10/10 10:52		
Field pH	**5.33**	Std. Units		1		11/10/10 10:52		
Field Temperature	**13.7**	deg C		1		11/10/10 10:52		
Static Water Level	**83.06**	feet		1		11/10/10 10:52		
Field Specific Conductance	**35**	umhos/cm		1		11/10/10 10:52		
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Antimony	ND	ug/L	5.0	1	11/05/10 11:30	11/08/10 18:36	7440-36-0	
Arsenic	ND	ug/L	5.0	1	11/05/10 11:30	11/08/10 18:36	7440-38-2	
Barium	**147**	ug/L	5.0	1	11/05/10 11:30	11/08/10 18:36	7440-39-3	
Beryllium	ND	ug/L	1.0	1	11/05/10 11:30	11/08/10 18:36	7440-41-7	
Cadmium	ND	ug/L	1.0	1	11/05/10 11:30	11/08/10 18:36	7440-43-9	
Chromium	**10.1**	ug/L	5.0	1	11/05/10 11:30	11/08/10 18:36	7440-47-3	
Cobalt	ND	ug/L	5.0	1	11/05/10 11:30	11/08/10 18:36	7440-48-4	
Copper	**6.7**	ug/L	5.0	1	11/05/10 11:30	11/08/10 18:36	7440-50-8	
Lead	ND	ug/L	5.0	1	11/05/10 11:30	11/08/10 18:36	7439-92-1	
Nickel	**7.0**	ug/L	5.0	1	11/05/10 11:30	11/08/10 18:36	7440-02-0	
Selenium	ND	ug/L	10.0	1	11/05/10 11:30	11/08/10 18:36	7782-49-2	
Silver	ND	ug/L	5.0	1	11/05/10 11:30	11/08/10 18:36	7440-22-4	
Thallium	ND	ug/L	5.4	1	11/05/10 11:30	11/08/10 18:36	7440-28-0	
Vanadium	**17.4**	ug/L	5.0	1	11/05/10 11:30	11/08/10 18:36	7440-62-2	
Zinc	**19.1**	ug/L	10.0	1	11/05/10 11:30	11/08/10 18:36	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		10/31/10 12:15	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		10/31/10 12:15	107-13-1	
Benzene	ND	ug/L	1.0	1		10/31/10 12:15	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		10/31/10 12:15	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		10/31/10 12:15	75-27-4	
Bromoform	ND	ug/L	1.0	1		10/31/10 12:15	75-25-2	
Bromomethane	ND	ug/L	2.0	1		10/31/10 12:15	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		10/31/10 12:15	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		10/31/10 12:15	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		10/31/10 12:15	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		10/31/10 12:15	108-90-7	
Chloroethane	ND	ug/L	1.0	1		10/31/10 12:15	75-00-3	
Chloroform	ND	ug/L	1.0	1		10/31/10 12:15	67-66-3	
Chloromethane	ND	ug/L	1.0	1		10/31/10 12:15	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		10/31/10 12:15	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		10/31/10 12:15	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		10/31/10 12:15	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		10/31/10 12:15	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		10/31/10 12:15	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		10/31/10 12:15	106-46-7	

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ANALYTICAL RESULTS

Project: White Oak LF 10/26/10
Pace Project No.: 9280732

Sample: MW-11S **Lab ID: 9280732015** Collected: 10/27/10 13:45 Received: 10/27/10 16:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		10/31/10 12:15	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		10/31/10 12:15	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		10/31/10 12:15	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		10/31/10 12:15	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		10/31/10 12:15	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		10/31/10 12:15	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		10/31/10 12:15	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		10/31/10 12:15	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		10/31/10 12:15	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		10/31/10 12:15	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		10/31/10 12:15	591-78-6	
Iodomethane	ND	ug/L	5.0	1		10/31/10 12:15	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		10/31/10 12:15	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		10/31/10 12:15	108-10-1	
Styrene	ND	ug/L	1.0	1		10/31/10 12:15	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		10/31/10 12:15	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		10/31/10 12:15	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		10/31/10 12:15	127-18-4	
Toluene	ND	ug/L	1.0	1		10/31/10 12:15	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		10/31/10 12:15	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		10/31/10 12:15	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		10/31/10 12:15	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		10/31/10 12:15	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		10/31/10 12:15	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		10/31/10 12:15	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		10/31/10 12:15	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		10/31/10 12:15	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		10/31/10 12:15	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		10/31/10 12:15	95-47-6	
4-Bromofluorobenzene (S)	88	%	70-130	1		10/31/10 12:15	460-00-4	
Dibromofluoromethane (S)	104	%	70-130	1		10/31/10 12:15	1868-53-7	
1,2-Dichloroethane-d4 (S)	107	%	70-130	1		10/31/10 12:15	17060-07-0	
Toluene-d8 (S)	102	%	70-130	1		10/31/10 12:15	2037-26-5	

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ANALYTICAL RESULTS

Project: White Oak LF 10/26/10
Pace Project No.: 9280732

Sample: MW-11D **Lab ID: 9280732016** Collected: 10/27/10 14:00 Received: 10/27/10 16:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	**MPS**			1		11/10/10 10:53		
Collected Date	**10/27/10**			1		11/10/10 10:53		
Collected Time	**14:00**			1		11/10/10 10:53		
Field pH	**6.38**	Std. Units		1		11/10/10 10:53		
Field Temperature	**14.1**	deg C		1		11/10/10 10:53		
Static Water Level	**83.14**	feet		1		11/10/10 10:53		
Field Specific Conductance	**52**	umhos/cm		1		11/10/10 10:53		
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Antimony	ND	ug/L	5.0	1	11/05/10 11:30	11/08/10 18:42	7440-36-0	
Arsenic	ND	ug/L	5.0	1	11/05/10 11:30	11/08/10 18:42	7440-38-2	
Barium	**15.8**	ug/L	5.0	1	11/05/10 11:30	11/08/10 18:42	7440-39-3	
Beryllium	ND	ug/L	1.0	1	11/05/10 11:30	11/08/10 18:42	7440-41-7	
Cadmium	ND	ug/L	1.0	1	11/05/10 11:30	11/08/10 18:42	7440-43-9	
Chromium	ND	ug/L	5.0	1	11/05/10 11:30	11/08/10 18:42	7440-47-3	
Cobalt	ND	ug/L	5.0	1	11/05/10 11:30	11/08/10 18:42	7440-48-4	
Copper	ND	ug/L	5.0	1	11/05/10 11:30	11/08/10 18:42	7440-50-8	
Lead	ND	ug/L	5.0	1	11/05/10 11:30	11/08/10 18:42	7439-92-1	
Nickel	ND	ug/L	5.0	1	11/05/10 11:30	11/08/10 18:42	7440-02-0	
Selenium	ND	ug/L	10.0	1	11/05/10 11:30	11/08/10 18:42	7782-49-2	
Silver	ND	ug/L	5.0	1	11/05/10 11:30	11/08/10 18:42	7440-22-4	
Thallium	ND	ug/L	5.4	1	11/05/10 11:30	11/08/10 18:42	7440-28-0	
Vanadium	ND	ug/L	5.0	1	11/05/10 11:30	11/08/10 18:42	7440-62-2	
Zinc	ND	ug/L	10.0	1	11/05/10 11:30	11/08/10 18:42	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		10/31/10 12:41	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		10/31/10 12:41	107-13-1	
Benzene	ND	ug/L	1.0	1		10/31/10 12:41	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		10/31/10 12:41	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		10/31/10 12:41	75-27-4	
Bromoform	ND	ug/L	1.0	1		10/31/10 12:41	75-25-2	
Bromomethane	ND	ug/L	2.0	1		10/31/10 12:41	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		10/31/10 12:41	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		10/31/10 12:41	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		10/31/10 12:41	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		10/31/10 12:41	108-90-7	
Chloroethane	ND	ug/L	1.0	1		10/31/10 12:41	75-00-3	
Chloroform	ND	ug/L	1.0	1		10/31/10 12:41	67-66-3	
Chloromethane	ND	ug/L	1.0	1		10/31/10 12:41	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		10/31/10 12:41	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		10/31/10 12:41	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		10/31/10 12:41	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		10/31/10 12:41	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		10/31/10 12:41	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		10/31/10 12:41	106-46-7	

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ANALYTICAL RESULTS

Project: White Oak LF 10/26/10
Pace Project No.: 9280732

Sample: MW-11D **Lab ID: 9280732016** Collected: 10/27/10 14:00 Received: 10/27/10 16:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		10/31/10 12:41	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		10/31/10 12:41	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		10/31/10 12:41	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		10/31/10 12:41	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		10/31/10 12:41	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		10/31/10 12:41	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		10/31/10 12:41	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		10/31/10 12:41	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		10/31/10 12:41	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		10/31/10 12:41	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		10/31/10 12:41	591-78-6	
Iodomethane	ND	ug/L	5.0	1		10/31/10 12:41	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		10/31/10 12:41	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		10/31/10 12:41	108-10-1	
Styrene	ND	ug/L	1.0	1		10/31/10 12:41	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		10/31/10 12:41	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		10/31/10 12:41	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		10/31/10 12:41	127-18-4	
Toluene	ND	ug/L	1.0	1		10/31/10 12:41	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		10/31/10 12:41	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		10/31/10 12:41	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		10/31/10 12:41	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		10/31/10 12:41	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		10/31/10 12:41	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		10/31/10 12:41	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		10/31/10 12:41	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		10/31/10 12:41	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		10/31/10 12:41	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		10/31/10 12:41	95-47-6	
4-Bromofluorobenzene (S)	94	%	70-130	1		10/31/10 12:41	460-00-4	
Dibromofluoromethane (S)	100	%	70-130	1		10/31/10 12:41	1868-53-7	
1,2-Dichloroethane-d4 (S)	109	%	70-130	1		10/31/10 12:41	17060-07-0	
Toluene-d8 (S)	102	%	70-130	1		10/31/10 12:41	2037-26-5	

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ANALYTICAL RESULTS

Project: White Oak LF 10/26/10
Pace Project No.: 9280732

Sample: MW-14 **Lab ID: 9280732017** Collected: 10/27/10 14:40 Received: 10/27/10 16:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	**MPS**			1		11/10/10 10:54		
Collected Date	**10/27/10**			1		11/10/10 10:54		
Collected Time	**14:40**			1		11/10/10 10:54		
Field pH	**6.06**	Std. Units		1		11/10/10 10:54		
Field Temperature	**14.1**	deg C		1		11/10/10 10:54		
Static Water Level	**102.95**	feet		1		11/10/10 10:54		
Field Specific Conductance	**54**	umhos/cm		1		11/10/10 10:54		
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Antimony	ND	ug/L	5.0	1	11/05/10 11:30	11/08/10 18:46	7440-36-0	
Arsenic	ND	ug/L	5.0	1	11/05/10 11:30	11/08/10 18:46	7440-38-2	
Barium	**162**	ug/L	5.0	1	11/05/10 11:30	11/08/10 18:46	7440-39-3	
Beryllium	ND	ug/L	1.0	1	11/05/10 11:30	11/08/10 18:46	7440-41-7	
Cadmium	ND	ug/L	1.0	1	11/05/10 11:30	11/08/10 18:46	7440-43-9	
Chromium	**6.6**	ug/L	5.0	1	11/05/10 11:30	11/08/10 18:46	7440-47-3	
Cobalt	ND	ug/L	5.0	1	11/05/10 11:30	11/08/10 18:46	7440-48-4	
Copper	ND	ug/L	5.0	1	11/05/10 11:30	11/08/10 18:46	7440-50-8	
Lead	ND	ug/L	5.0	1	11/05/10 11:30	11/08/10 18:46	7439-92-1	
Nickel	ND	ug/L	5.0	1	11/05/10 11:30	11/08/10 18:46	7440-02-0	
Selenium	ND	ug/L	10.0	1	11/05/10 11:30	11/08/10 18:46	7782-49-2	
Silver	ND	ug/L	5.0	1	11/05/10 11:30	11/08/10 18:46	7440-22-4	
Thallium	ND	ug/L	5.4	1	11/05/10 11:30	11/08/10 18:46	7440-28-0	
Vanadium	ND	ug/L	5.0	1	11/05/10 11:30	11/08/10 18:46	7440-62-2	
Zinc	**12.3**	ug/L	10.0	1	11/05/10 11:30	11/08/10 18:46	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		10/31/10 13:07	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		10/31/10 13:07	107-13-1	
Benzene	ND	ug/L	1.0	1		10/31/10 13:07	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		10/31/10 13:07	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		10/31/10 13:07	75-27-4	
Bromoform	ND	ug/L	1.0	1		10/31/10 13:07	75-25-2	
Bromomethane	ND	ug/L	2.0	1		10/31/10 13:07	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		10/31/10 13:07	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		10/31/10 13:07	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		10/31/10 13:07	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		10/31/10 13:07	108-90-7	
Chloroethane	ND	ug/L	1.0	1		10/31/10 13:07	75-00-3	
Chloroform	ND	ug/L	1.0	1		10/31/10 13:07	67-66-3	
Chloromethane	ND	ug/L	1.0	1		10/31/10 13:07	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		10/31/10 13:07	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		10/31/10 13:07	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		10/31/10 13:07	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		10/31/10 13:07	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		10/31/10 13:07	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		10/31/10 13:07	106-46-7	

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ANALYTICAL RESULTS

Project: White Oak LF 10/26/10
Pace Project No.: 9280732

Sample: MW-14 **Lab ID: 9280732017** Collected: 10/27/10 14:40 Received: 10/27/10 16:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		10/31/10 13:07	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		10/31/10 13:07	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		10/31/10 13:07	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		10/31/10 13:07	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		10/31/10 13:07	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		10/31/10 13:07	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		10/31/10 13:07	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		10/31/10 13:07	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		10/31/10 13:07	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		10/31/10 13:07	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		10/31/10 13:07	591-78-6	
Iodomethane	ND	ug/L	5.0	1		10/31/10 13:07	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		10/31/10 13:07	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		10/31/10 13:07	108-10-1	
Styrene	ND	ug/L	1.0	1		10/31/10 13:07	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		10/31/10 13:07	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		10/31/10 13:07	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		10/31/10 13:07	127-18-4	
Toluene	ND	ug/L	1.0	1		10/31/10 13:07	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		10/31/10 13:07	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		10/31/10 13:07	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		10/31/10 13:07	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		10/31/10 13:07	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		10/31/10 13:07	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		10/31/10 13:07	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		10/31/10 13:07	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		10/31/10 13:07	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		10/31/10 13:07	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		10/31/10 13:07	95-47-6	
4-Bromofluorobenzene (S)	95	%	70-130	1		10/31/10 13:07	460-00-4	
Dibromofluoromethane (S)	105	%	70-130	1		10/31/10 13:07	1868-53-7	
1,2-Dichloroethane-d4 (S)	108	%	70-130	1		10/31/10 13:07	17060-07-0	
Toluene-d8 (S)	100	%	70-130	1		10/31/10 13:07	2037-26-5	

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ANALYTICAL RESULTS

Project: White Oak LF 10/26/10
Pace Project No.: 9280732

Sample: MW-16 **Lab ID: 9280732018** Collected: 10/27/10 12:50 Received: 10/27/10 16:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	**MPS**			1		11/10/10 10:56		
Collected Date	**10/27/10**			1		11/10/10 10:56		
Collected Time	**12:50**			1		11/10/10 10:56		
Field pH	**5.65**	Std. Units		1		11/10/10 10:56		
Field Temperature	**15.9**	deg C		1		11/10/10 10:56		
Static Water Level	**36.50**	feet		1		11/10/10 10:56		
Field Specific Conductance	**221**	umhos/cm		1		11/10/10 10:56		
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Antimony	ND	ug/L	5.0	1	11/05/10 11:30	11/08/10 18:49	7440-36-0	
Arsenic	ND	ug/L	5.0	1	11/05/10 11:30	11/08/10 18:49	7440-38-2	
Barium	**191**	ug/L	5.0	1	11/05/10 11:30	11/08/10 18:49	7440-39-3	
Beryllium	ND	ug/L	1.0	1	11/05/10 11:30	11/08/10 18:49	7440-41-7	
Cadmium	ND	ug/L	1.0	1	11/05/10 11:30	11/08/10 18:49	7440-43-9	
Chromium	ND	ug/L	5.0	1	11/05/10 11:30	11/08/10 18:49	7440-47-3	
Cobalt	**29.6**	ug/L	5.0	1	11/05/10 11:30	11/08/10 18:49	7440-48-4	
Copper	ND	ug/L	5.0	1	11/05/10 11:30	11/08/10 18:49	7440-50-8	
Lead	ND	ug/L	5.0	1	11/05/10 11:30	11/08/10 18:49	7439-92-1	
Nickel	**10.8**	ug/L	5.0	1	11/05/10 11:30	11/08/10 18:49	7440-02-0	
Selenium	ND	ug/L	10.0	1	11/05/10 11:30	11/08/10 18:49	7782-49-2	
Silver	ND	ug/L	5.0	1	11/05/10 11:30	11/08/10 18:49	7440-22-4	
Thallium	ND	ug/L	5.4	1	11/05/10 11:30	11/08/10 18:49	7440-28-0	
Vanadium	ND	ug/L	5.0	1	11/05/10 11:30	11/08/10 18:49	7440-62-2	
Zinc	ND	ug/L	10.0	1	11/05/10 11:30	11/08/10 18:49	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		10/31/10 13:32	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		10/31/10 13:32	107-13-1	
Benzene	ND	ug/L	1.0	1		10/31/10 13:32	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		10/31/10 13:32	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		10/31/10 13:32	75-27-4	
Bromoform	ND	ug/L	1.0	1		10/31/10 13:32	75-25-2	
Bromomethane	ND	ug/L	2.0	1		10/31/10 13:32	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		10/31/10 13:32	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		10/31/10 13:32	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		10/31/10 13:32	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		10/31/10 13:32	108-90-7	
Chloroethane	ND	ug/L	1.0	1		10/31/10 13:32	75-00-3	
Chloroform	ND	ug/L	1.0	1		10/31/10 13:32	67-66-3	
Chloromethane	ND	ug/L	1.0	1		10/31/10 13:32	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		10/31/10 13:32	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		10/31/10 13:32	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		10/31/10 13:32	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		10/31/10 13:32	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		10/31/10 13:32	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		10/31/10 13:32	106-46-7	

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ANALYTICAL RESULTS

Project: White Oak LF 10/26/10
Pace Project No.: 9280732

Sample: MW-16 **Lab ID: 9280732018** Collected: 10/27/10 12:50 Received: 10/27/10 16:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		10/31/10 13:32	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		10/31/10 13:32	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		10/31/10 13:32	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		10/31/10 13:32	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		10/31/10 13:32	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		10/31/10 13:32	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		10/31/10 13:32	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		10/31/10 13:32	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		10/31/10 13:32	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		10/31/10 13:32	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		10/31/10 13:32	591-78-6	
Iodomethane	ND	ug/L	5.0	1		10/31/10 13:32	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		10/31/10 13:32	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		10/31/10 13:32	108-10-1	
Styrene	ND	ug/L	1.0	1		10/31/10 13:32	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		10/31/10 13:32	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		10/31/10 13:32	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		10/31/10 13:32	127-18-4	
Toluene	ND	ug/L	1.0	1		10/31/10 13:32	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		10/31/10 13:32	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		10/31/10 13:32	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		10/31/10 13:32	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		10/31/10 13:32	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		10/31/10 13:32	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		10/31/10 13:32	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		10/31/10 13:32	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		10/31/10 13:32	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		10/31/10 13:32	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		10/31/10 13:32	95-47-6	
4-Bromofluorobenzene (S)	92	%	70-130	1		10/31/10 13:32	460-00-4	
Dibromofluoromethane (S)	106	%	70-130	1		10/31/10 13:32	1868-53-7	
1,2-Dichloroethane-d4 (S)	108	%	70-130	1		10/31/10 13:32	17060-07-0	
Toluene-d8 (S)	102	%	70-130	1		10/31/10 13:32	2037-26-5	

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ANALYTICAL RESULTS

Project: White Oak LF 10/26/10
Pace Project No.: 9280732

Sample: MW-17 **Lab ID: 9280732019** Collected: 10/27/10 13:00 Received: 10/27/10 16:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	**MPS**			1		11/10/10 10:57		
Collected Date	**10/27/10**			1		11/10/10 10:57		
Collected Time	**13:00**			1		11/10/10 10:57		
Field pH	**5.82**	Std. Units		1		11/10/10 10:57		
Field Temperature	**15.0**	deg C		1		11/10/10 10:57		
Static Water Level	**57.05**	feet		1		11/10/10 10:57		
Field Specific Conductance	**90**	umhos/cm		1		11/10/10 10:57		
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Antimony	ND	ug/L	5.0	1	11/05/10 11:30	11/08/10 18:53	7440-36-0	
Arsenic	ND	ug/L	5.0	1	11/05/10 11:30	11/08/10 18:53	7440-38-2	
Barium	**84.4**	ug/L	5.0	1	11/05/10 11:30	11/08/10 18:53	7440-39-3	
Beryllium	ND	ug/L	1.0	1	11/05/10 11:30	11/08/10 18:53	7440-41-7	
Cadmium	ND	ug/L	1.0	1	11/05/10 11:30	11/08/10 18:53	7440-43-9	
Chromium	ND	ug/L	5.0	1	11/05/10 11:30	11/08/10 18:53	7440-47-3	
Cobalt	ND	ug/L	5.0	1	11/05/10 11:30	11/08/10 18:53	7440-48-4	
Copper	ND	ug/L	5.0	1	11/05/10 11:30	11/08/10 18:53	7440-50-8	
Lead	ND	ug/L	5.0	1	11/05/10 11:30	11/08/10 18:53	7439-92-1	
Nickel	ND	ug/L	5.0	1	11/05/10 11:30	11/08/10 18:53	7440-02-0	
Selenium	ND	ug/L	10.0	1	11/05/10 11:30	11/08/10 18:53	7782-49-2	
Silver	ND	ug/L	5.0	1	11/05/10 11:30	11/08/10 18:53	7440-22-4	
Thallium	ND	ug/L	5.4	1	11/05/10 11:30	11/08/10 18:53	7440-28-0	
Vanadium	ND	ug/L	5.0	1	11/05/10 11:30	11/08/10 18:53	7440-62-2	
Zinc	ND	ug/L	10.0	1	11/05/10 11:30	11/08/10 18:53	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		10/31/10 13:58	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		10/31/10 13:58	107-13-1	
Benzene	ND	ug/L	1.0	1		10/31/10 13:58	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		10/31/10 13:58	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		10/31/10 13:58	75-27-4	
Bromoform	ND	ug/L	1.0	1		10/31/10 13:58	75-25-2	
Bromomethane	ND	ug/L	2.0	1		10/31/10 13:58	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		10/31/10 13:58	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		10/31/10 13:58	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		10/31/10 13:58	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		10/31/10 13:58	108-90-7	
Chloroethane	ND	ug/L	1.0	1		10/31/10 13:58	75-00-3	
Chloroform	ND	ug/L	1.0	1		10/31/10 13:58	67-66-3	
Chloromethane	ND	ug/L	1.0	1		10/31/10 13:58	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		10/31/10 13:58	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		10/31/10 13:58	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		10/31/10 13:58	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		10/31/10 13:58	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		10/31/10 13:58	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		10/31/10 13:58	106-46-7	

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ANALYTICAL RESULTS

Project: White Oak LF 10/26/10
Pace Project No.: 9280732

Sample: MW-17 **Lab ID: 9280732019** Collected: 10/27/10 13:00 Received: 10/27/10 16:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		10/31/10 13:58	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		10/31/10 13:58	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		10/31/10 13:58	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		10/31/10 13:58	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		10/31/10 13:58	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		10/31/10 13:58	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		10/31/10 13:58	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		10/31/10 13:58	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		10/31/10 13:58	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		10/31/10 13:58	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		10/31/10 13:58	591-78-6	
Iodomethane	ND	ug/L	5.0	1		10/31/10 13:58	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		10/31/10 13:58	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		10/31/10 13:58	108-10-1	
Styrene	ND	ug/L	1.0	1		10/31/10 13:58	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		10/31/10 13:58	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		10/31/10 13:58	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		10/31/10 13:58	127-18-4	
Toluene	ND	ug/L	1.0	1		10/31/10 13:58	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		10/31/10 13:58	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		10/31/10 13:58	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		10/31/10 13:58	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		10/31/10 13:58	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		10/31/10 13:58	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		10/31/10 13:58	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		10/31/10 13:58	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		10/31/10 13:58	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		10/31/10 13:58	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		10/31/10 13:58	95-47-6	
4-Bromofluorobenzene (S)	90	%	70-130	1		10/31/10 13:58	460-00-4	
Dibromofluoromethane (S)	105	%	70-130	1		10/31/10 13:58	1868-53-7	
1,2-Dichloroethane-d4 (S)	110	%	70-130	1		10/31/10 13:58	17060-07-0	
Toluene-d8 (S)	102	%	70-130	1		10/31/10 13:58	2037-26-5	

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ANALYTICAL RESULTS

Project: White Oak LF 10/26/10
Pace Project No.: 9280732

Sample: Travel Blank Ash102610 **Lab ID: 9280732020** Collected: 10/26/10 00:00 Received: 10/27/10 16:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		10/31/10 14:23	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		10/31/10 14:23	107-13-1	
Benzene	ND	ug/L	1.0	1		10/31/10 14:23	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		10/31/10 14:23	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		10/31/10 14:23	75-27-4	
Bromoform	ND	ug/L	1.0	1		10/31/10 14:23	75-25-2	
Bromomethane	ND	ug/L	2.0	1		10/31/10 14:23	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		10/31/10 14:23	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		10/31/10 14:23	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		10/31/10 14:23	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		10/31/10 14:23	108-90-7	
Chloroethane	ND	ug/L	1.0	1		10/31/10 14:23	75-00-3	
Chloroform	ND	ug/L	1.0	1		10/31/10 14:23	67-66-3	
Chloromethane	ND	ug/L	1.0	1		10/31/10 14:23	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		10/31/10 14:23	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		10/31/10 14:23	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		10/31/10 14:23	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		10/31/10 14:23	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		10/31/10 14:23	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		10/31/10 14:23	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		10/31/10 14:23	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		10/31/10 14:23	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		10/31/10 14:23	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		10/31/10 14:23	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		10/31/10 14:23	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		10/31/10 14:23	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		10/31/10 14:23	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		10/31/10 14:23	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		10/31/10 14:23	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		10/31/10 14:23	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		10/31/10 14:23	591-78-6	
Iodomethane	ND	ug/L	5.0	1		10/31/10 14:23	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		10/31/10 14:23	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		10/31/10 14:23	108-10-1	
Styrene	ND	ug/L	1.0	1		10/31/10 14:23	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		10/31/10 14:23	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		10/31/10 14:23	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		10/31/10 14:23	127-18-4	
Toluene	ND	ug/L	1.0	1		10/31/10 14:23	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		10/31/10 14:23	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		10/31/10 14:23	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		10/31/10 14:23	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		10/31/10 14:23	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		10/31/10 14:23	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		10/31/10 14:23	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		10/31/10 14:23	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		10/31/10 14:23	1330-20-7	

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ANALYTICAL RESULTS

Project: White Oak LF 10/26/10
Pace Project No.: 9280732

Sample: Travel Blank Ash102610 **Lab ID: 9280732020** Collected: 10/26/10 00:00 Received: 10/27/10 16:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
m&p-Xylene	ND	ug/L	2.0	1		10/31/10 14:23	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		10/31/10 14:23	95-47-6	
4-Bromofluorobenzene (S)	96	%	70-130	1		10/31/10 14:23	460-00-4	
Dibromofluoromethane (S)	102	%	70-130	1		10/31/10 14:23	1868-53-7	
1,2-Dichloroethane-d4 (S)	104	%	70-130	1		10/31/10 14:23	17060-07-0	
Toluene-d8 (S)	99	%	70-130	1		10/31/10 14:23	2037-26-5	

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ANALYTICAL RESULTS

Project: White Oak LF 10/26/10
Pace Project No.: 9280732

Sample: Equip Blank Ash102610 **Lab ID: 9280732021** Collected: 10/26/10 00:00 Received: 10/27/10 16:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Antimony	ND	ug/L	5.0	1	11/05/10 11:30	11/08/10 18:57	7440-36-0	
Arsenic	ND	ug/L	5.0	1	11/05/10 11:30	11/08/10 18:57	7440-38-2	
Barium	ND	ug/L	5.0	1	11/05/10 11:30	11/08/10 18:57	7440-39-3	
Beryllium	ND	ug/L	1.0	1	11/05/10 11:30	11/08/10 18:57	7440-41-7	
Cadmium	ND	ug/L	1.0	1	11/05/10 11:30	11/08/10 18:57	7440-43-9	
Chromium	ND	ug/L	5.0	1	11/05/10 11:30	11/08/10 18:57	7440-47-3	
Cobalt	ND	ug/L	5.0	1	11/05/10 11:30	11/08/10 18:57	7440-48-4	
Copper	ND	ug/L	5.0	1	11/05/10 11:30	11/08/10 18:57	7440-50-8	
Lead	ND	ug/L	5.0	1	11/05/10 11:30	11/08/10 18:57	7439-92-1	
Nickel	ND	ug/L	5.0	1	11/05/10 11:30	11/08/10 18:57	7440-02-0	
Selenium	ND	ug/L	10.0	1	11/05/10 11:30	11/08/10 18:57	7782-49-2	
Silver	ND	ug/L	5.0	1	11/05/10 11:30	11/08/10 18:57	7440-22-4	
Thallium	ND	ug/L	5.4	1	11/05/10 11:30	11/08/10 18:57	7440-28-0	
Vanadium	ND	ug/L	5.0	1	11/05/10 11:30	11/08/10 18:57	7440-62-2	
Zinc	ND	ug/L	10.0	1	11/05/10 11:30	11/08/10 18:57	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		10/29/10 04:52	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		10/29/10 04:52	107-13-1	
Benzene	ND	ug/L	1.0	1		10/29/10 04:52	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		10/29/10 04:52	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		10/29/10 04:52	75-27-4	
Bromoform	ND	ug/L	1.0	1		10/29/10 04:52	75-25-2	
Bromomethane	ND	ug/L	2.0	1		10/29/10 04:52	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		10/29/10 04:52	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		10/29/10 04:52	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		10/29/10 04:52	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		10/29/10 04:52	108-90-7	
Chloroethane	ND	ug/L	1.0	1		10/29/10 04:52	75-00-3	
Chloroform	ND	ug/L	1.0	1		10/29/10 04:52	67-66-3	
Chloromethane	ND	ug/L	1.0	1		10/29/10 04:52	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		10/29/10 04:52	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		10/29/10 04:52	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		10/29/10 04:52	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		10/29/10 04:52	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		10/29/10 04:52	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		10/29/10 04:52	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		10/29/10 04:52	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		10/29/10 04:52	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		10/29/10 04:52	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		10/29/10 04:52	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		10/29/10 04:52	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		10/29/10 04:52	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		10/29/10 04:52	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		10/29/10 04:52	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		10/29/10 04:52	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		10/29/10 04:52	100-41-4	

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ANALYTICAL RESULTS

Project: White Oak LF 10/26/10
Pace Project No.: 9280732

Sample: Equip Blank Ash102610 **Lab ID: 9280732021** Collected: 10/26/10 00:00 Received: 10/27/10 16:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
2-Hexanone	ND	ug/L	5.0	1		10/29/10 04:52	591-78-6	
Iodomethane	ND	ug/L	5.0	1		10/29/10 04:52	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		10/29/10 04:52	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		10/29/10 04:52	108-10-1	
Styrene	ND	ug/L	1.0	1		10/29/10 04:52	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		10/29/10 04:52	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		10/29/10 04:52	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		10/29/10 04:52	127-18-4	
Toluene	ND	ug/L	1.0	1		10/29/10 04:52	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		10/29/10 04:52	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		10/29/10 04:52	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		10/29/10 04:52	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		10/29/10 04:52	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		10/29/10 04:52	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		10/29/10 04:52	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		10/29/10 04:52	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		10/29/10 04:52	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		10/29/10 04:52	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		10/29/10 04:52	95-47-6	
4-Bromofluorobenzene (S)	103	%	70-130	1		10/29/10 04:52	460-00-4	
Dibromofluoromethane (S)	109	%	70-130	1		10/29/10 04:52	1868-53-7	
1,2-Dichloroethane-d4 (S)	120	%	70-130	1		10/29/10 04:52	17060-07-0	
Toluene-d8 (S)	96	%	70-130	1		10/29/10 04:52	2037-26-5	

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ANALYTICAL RESULTS

Project: White Oak LF 10/26/10
Pace Project No.: 9280732

Sample: MW-15 **Lab ID: 9280732022** Collected: 10/27/10 14:10 Received: 10/27/10 16:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	**MPS**			1		11/10/10 10:55		
Collected Date	**10/27/10**			1		11/10/10 10:55		
Collected Time	**14:10**			1		11/10/10 10:55		
Field pH	**5.44**	Std. Units		1		11/10/10 10:55		
Field Temperature	**16.5**	deg C		1		11/10/10 10:55		
Static Water Level	**9.80**	feet		1		11/10/10 10:55		
Field Specific Conductance	**46**	umhos/cm		1		11/10/10 10:55		
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Antimony	ND	ug/L	5.0	1	11/05/10 11:30	11/08/10 19:00	7440-36-0	
Arsenic	ND	ug/L	5.0	1	11/05/10 11:30	11/08/10 19:00	7440-38-2	
Barium	**111**	ug/L	5.0	1	11/05/10 11:30	11/08/10 19:00	7440-39-3	
Beryllium	ND	ug/L	1.0	1	11/05/10 11:30	11/08/10 19:00	7440-41-7	
Cadmium	ND	ug/L	1.0	1	11/05/10 11:30	11/08/10 19:00	7440-43-9	
Chromium	**5.2**	ug/L	5.0	1	11/05/10 11:30	11/08/10 19:00	7440-47-3	
Cobalt	**7.8**	ug/L	5.0	1	11/05/10 11:30	11/08/10 19:00	7440-48-4	
Copper	**53.9**	ug/L	5.0	1	11/05/10 11:30	11/08/10 19:00	7440-50-8	
Lead	**16.0**	ug/L	5.0	1	11/05/10 11:30	11/08/10 19:00	7439-92-1	
Nickel	**7.5**	ug/L	5.0	1	11/05/10 11:30	11/08/10 19:00	7440-02-0	
Selenium	ND	ug/L	10.0	1	11/05/10 11:30	11/08/10 19:00	7782-49-2	
Silver	ND	ug/L	5.0	1	11/05/10 11:30	11/08/10 19:00	7440-22-4	
Thallium	ND	ug/L	5.4	1	11/05/10 11:30	11/08/10 19:00	7440-28-0	
Vanadium	**5.9**	ug/L	5.0	1	11/05/10 11:30	11/08/10 19:00	7440-62-2	
Zinc	**60.7**	ug/L	10.0	1	11/05/10 11:30	11/08/10 19:00	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		10/29/10 05:17	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		10/29/10 05:17	107-13-1	
Benzene	ND	ug/L	1.0	1		10/29/10 05:17	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		10/29/10 05:17	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		10/29/10 05:17	75-27-4	
Bromoform	ND	ug/L	1.0	1		10/29/10 05:17	75-25-2	
Bromomethane	ND	ug/L	2.0	1		10/29/10 05:17	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		10/29/10 05:17	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		10/29/10 05:17	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		10/29/10 05:17	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		10/29/10 05:17	108-90-7	
Chloroethane	ND	ug/L	1.0	1		10/29/10 05:17	75-00-3	
Chloroform	ND	ug/L	1.0	1		10/29/10 05:17	67-66-3	
Chloromethane	ND	ug/L	1.0	1		10/29/10 05:17	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		10/29/10 05:17	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		10/29/10 05:17	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		10/29/10 05:17	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		10/29/10 05:17	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		10/29/10 05:17	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		10/29/10 05:17	106-46-7	

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ANALYTICAL RESULTS

Project: White Oak LF 10/26/10
Pace Project No.: 9280732

Sample: MW-15 **Lab ID: 9280732022** Collected: 10/27/10 14:10 Received: 10/27/10 16:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		10/29/10 05:17	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		10/29/10 05:17	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		10/29/10 05:17	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		10/29/10 05:17	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		10/29/10 05:17	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		10/29/10 05:17	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		10/29/10 05:17	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		10/29/10 05:17	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		10/29/10 05:17	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		10/29/10 05:17	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		10/29/10 05:17	591-78-6	
Iodomethane	ND	ug/L	5.0	1		10/29/10 05:17	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		10/29/10 05:17	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		10/29/10 05:17	108-10-1	
Styrene	ND	ug/L	1.0	1		10/29/10 05:17	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		10/29/10 05:17	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		10/29/10 05:17	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		10/29/10 05:17	127-18-4	
Toluene	ND	ug/L	1.0	1		10/29/10 05:17	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		10/29/10 05:17	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		10/29/10 05:17	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		10/29/10 05:17	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		10/29/10 05:17	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		10/29/10 05:17	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		10/29/10 05:17	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		10/29/10 05:17	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		10/29/10 05:17	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		10/29/10 05:17	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		10/29/10 05:17	95-47-6	
4-Bromofluorobenzene (S)	105	%	70-130	1		10/29/10 05:17	460-00-4	
Dibromofluoromethane (S)	112	%	70-130	1		10/29/10 05:17	1868-53-7	
1,2-Dichloroethane-d4 (S)	122	%	70-130	1		10/29/10 05:17	17060-07-0	
Toluene-d8 (S)	97	%	70-130	1		10/29/10 05:17	2037-26-5	

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QUALITY CONTROL DATA

Project: White Oak LF 10/26/10
Pace Project No.: 9280732

QC Batch: MPRP/7331 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET NC Groundwater
Associated Lab Samples: 9280732001, 9280732002, 9280732003, 9280732004, 9280732005, 9280732006

METHOD BLANK: 519781 Matrix: Water
Associated Lab Samples: 9280732001, 9280732002, 9280732003, 9280732004, 9280732005, 9280732006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	ug/L	ND	5.0	11/01/10 21:30	
Arsenic	ug/L	ND	5.0	11/01/10 21:30	
Barium	ug/L	ND	5.0	11/01/10 21:30	
Beryllium	ug/L	ND	1.0	11/01/10 21:30	
Cadmium	ug/L	ND	1.0	11/01/10 21:30	
Chromium	ug/L	ND	5.0	11/01/10 21:30	
Cobalt	ug/L	ND	5.0	11/01/10 21:30	
Copper	ug/L	ND	5.0	11/01/10 21:30	
Lead	ug/L	ND	5.0	11/01/10 21:30	
Nickel	ug/L	ND	5.0	11/01/10 21:30	
Selenium	ug/L	ND	10.0	11/01/10 21:30	
Silver	ug/L	ND	5.0	11/01/10 21:30	
Thallium	ug/L	ND	5.4	11/01/10 21:30	
Vanadium	ug/L	ND	5.0	11/01/10 21:30	
Zinc	ug/L	ND	10.0	11/01/10 21:30	

LABORATORY CONTROL SAMPLE: 519782

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	500	502	100	80-120	
Arsenic	ug/L	500	506	101	80-120	
Barium	ug/L	500	505	101	80-120	
Beryllium	ug/L	500	520	104	80-120	
Cadmium	ug/L	500	510	102	80-120	
Chromium	ug/L	500	513	103	80-120	
Cobalt	ug/L	500	509	102	80-120	
Copper	ug/L	500	509	102	80-120	
Lead	ug/L	500	504	101	80-120	
Nickel	ug/L	500	506	101	80-120	
Selenium	ug/L	500	505	101	80-120	
Silver	ug/L	250	233	93	80-120	
Thallium	ug/L	500	491	98	80-120	
Vanadium	ug/L	500	516	103	80-120	
Zinc	ug/L	500	498	100	80-120	

MATRIX SPIKE SAMPLE: 519783

Parameter	Units	9280445005 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	2.6J	500	502	100	75-125	
Arsenic	ug/L	ND	500	504	100	75-125	

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QUALITY CONTROL DATA

Project: White Oak LF 10/26/10
Pace Project No.: 9280732

MATRIX SPIKE SAMPLE: 519783

Parameter	Units	9280445005 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	34.8J	500	534	100	75-125	
Beryllium	ug/L	ND	500	521	104	75-125	
Cadmium	ug/L	ND	500	509	102	75-125	
Chromium	ug/L	1.0J	500	515	103	75-125	
Cobalt	ug/L	0.80J	500	508	101	75-125	
Copper	ug/L	ND	500	510	102	75-125	
Lead	ug/L	ND	500	499	100	75-125	
Nickel	ug/L	ND	500	504	101	75-125	
Selenium	ug/L	ND	500	506	101	75-125	
Silver	ug/L	ND	250	234	94	75-125	
Thallium	ug/L	ND	500	484	97	75-125	
Vanadium	ug/L	ND	500	517	103	75-125	
Zinc	ug/L	5.6J	500	503	99	75-125	

SAMPLE DUPLICATE: 519784

Parameter	Units	9280445006 Result	Dup Result	RPD	Qualifiers
Antimony	ug/L	ND	ND		
Arsenic	ug/L	ND	ND		
Barium	ug/L	78.5J	76.2	3	
Beryllium	ug/L	ND	ND		
Cadmium	ug/L	ND	ND		
Chromium	ug/L	0.74J	.52J		
Cobalt	ug/L	64.2	62.6	3	
Copper	ug/L	0.86J	.54J		
Lead	ug/L	ND	ND		
Nickel	ug/L	ND	ND		
Selenium	ug/L	ND	ND		
Silver	ug/L	ND	ND		
Thallium	ug/L	3.8J	5.5		
Vanadium	ug/L	0.54J	ND		
Zinc	ug/L	8.2J	6.7J		

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QUALITY CONTROL DATA

Project: White Oak LF 10/26/10
Pace Project No.: 9280732

QC Batch: MPRP/7332 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET NC Groundwater
Associated Lab Samples: 9280732008, 9280732009, 9280732010, 9280732011, 9280732012, 9280732013

METHOD BLANK: 519785 Matrix: Water
Associated Lab Samples: 9280732008, 9280732009, 9280732010, 9280732011, 9280732012, 9280732013

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	ug/L	ND	5.0	11/02/10 02:17	
Arsenic	ug/L	ND	5.0	11/02/10 02:17	
Barium	ug/L	ND	5.0	11/02/10 02:17	
Beryllium	ug/L	ND	1.0	11/02/10 02:17	
Cadmium	ug/L	ND	1.0	11/02/10 02:17	
Chromium	ug/L	ND	5.0	11/02/10 02:17	
Cobalt	ug/L	ND	5.0	11/02/10 02:17	
Copper	ug/L	ND	5.0	11/02/10 02:17	
Lead	ug/L	ND	5.0	11/02/10 02:17	
Nickel	ug/L	ND	5.0	11/02/10 02:17	
Selenium	ug/L	ND	10.0	11/02/10 02:17	
Silver	ug/L	ND	5.0	11/02/10 02:17	
Thallium	ug/L	ND	5.4	11/03/10 01:17	
Vanadium	ug/L	ND	5.0	11/02/10 02:17	
Zinc	ug/L	ND	10.0	11/02/10 02:17	

LABORATORY CONTROL SAMPLE: 519786

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	500	506	101	80-120	
Arsenic	ug/L	500	509	102	80-120	
Barium	ug/L	500	508	102	80-120	
Beryllium	ug/L	500	522	104	80-120	
Cadmium	ug/L	500	511	102	80-120	
Chromium	ug/L	500	515	103	80-120	
Cobalt	ug/L	500	512	102	80-120	
Copper	ug/L	500	511	102	80-120	
Lead	ug/L	500	506	101	80-120	
Nickel	ug/L	500	507	101	80-120	
Selenium	ug/L	500	505	101	80-120	
Silver	ug/L	250	234	94	80-120	
Thallium	ug/L	500	496	99	80-120	
Vanadium	ug/L	500	518	104	80-120	
Zinc	ug/L	500	499	100	80-120	

MATRIX SPIKE SAMPLE: 519787

Parameter	Units	9280763007 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	ND	500	493	98	75-125	
Arsenic	ug/L	ND	500	497	99	75-125	

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QUALITY CONTROL DATA

Project: White Oak LF 10/26/10
Pace Project No.: 9280732

MATRIX SPIKE SAMPLE: 519787

Parameter	Units	9280763007 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	52.6	500	541	98	75-125	
Beryllium	ug/L	ND	500	513	103	75-125	
Cadmium	ug/L	ND	500	497	99	75-125	
Chromium	ug/L	4.6J	500	510	101	75-125	
Cobalt	ug/L	3.2J	500	502	100	75-125	
Copper	ug/L	5.1	500	507	100	75-125	
Lead	ug/L	ND	500	492	98	75-125	
Nickel	ug/L	3.8J	500	500	99	75-125	
Selenium	ug/L	ND	500	493	98	75-125	
Silver	ug/L	ND	250	229	92	75-125	
Thallium	ug/L	7.1	500	483	95	75-125	
Vanadium	ug/L	6.8	500	516	102	75-125	
Zinc	ug/L	21.1	500	508	97	75-125	

SAMPLE DUPLICATE: 519788

Parameter	Units	9280763008 Result	Dup Result	RPD	Qualifiers
Antimony	ug/L	2.6J	ND		
Arsenic	ug/L	ND	ND		
Barium	ug/L	43.9	42.7	3	
Beryllium	ug/L	ND	ND		
Cadmium	ug/L	ND	ND		
Chromium	ug/L	4.0J	3.9J		
Cobalt	ug/L	2.8J	2.6J		
Copper	ug/L	4.6J	4.2J		
Lead	ug/L	ND	ND		
Nickel	ug/L	3.0J	2.5J		
Selenium	ug/L	5.8J	ND		
Silver	ug/L	ND	ND		
Thallium	ug/L	8.2	ND		
Vanadium	ug/L	6.0	5.7	5	
Zinc	ug/L	21.5	20.5	5	

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QUALITY CONTROL DATA

Project: White Oak LF 10/26/10
Pace Project No.: 9280732

QC Batch: MPRP/7370 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET NC Groundwater
Associated Lab Samples: 9280732014, 9280732015, 9280732016, 9280732017, 9280732018, 9280732019, 9280732021, 9280732022

METHOD BLANK: 523417 Matrix: Water
Associated Lab Samples: 9280732014, 9280732015, 9280732016, 9280732017, 9280732018, 9280732019, 9280732021, 9280732022

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	ug/L	ND	5.0	11/08/10 18:06	
Arsenic	ug/L	ND	5.0	11/08/10 18:06	
Barium	ug/L	ND	5.0	11/08/10 18:06	
Beryllium	ug/L	ND	1.0	11/08/10 18:06	
Cadmium	ug/L	ND	1.0	11/08/10 18:06	
Chromium	ug/L	ND	5.0	11/08/10 18:06	
Cobalt	ug/L	ND	5.0	11/08/10 18:06	
Copper	ug/L	ND	5.0	11/08/10 18:06	
Lead	ug/L	ND	5.0	11/08/10 18:06	
Nickel	ug/L	ND	5.0	11/08/10 18:06	
Selenium	ug/L	ND	10.0	11/08/10 18:06	
Silver	ug/L	ND	5.0	11/08/10 18:06	
Thallium	ug/L	ND	5.4	11/08/10 18:06	
Vanadium	ug/L	ND	5.0	11/08/10 18:06	
Zinc	ug/L	ND	10.0	11/08/10 18:06	

LABORATORY CONTROL SAMPLE: 523418

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	500	504	101	80-120	
Arsenic	ug/L	500	502	100	80-120	
Barium	ug/L	500	515	103	80-120	
Beryllium	ug/L	500	538	108	80-120	
Cadmium	ug/L	500	509	102	80-120	
Chromium	ug/L	500	511	102	80-120	
Cobalt	ug/L	500	514	103	80-120	
Copper	ug/L	500	520	104	80-120	
Lead	ug/L	500	508	102	80-120	
Nickel	ug/L	500	507	101	80-120	
Selenium	ug/L	500	505	101	80-120	
Silver	ug/L	250	232	93	80-120	
Thallium	ug/L	500	518	104	80-120	
Vanadium	ug/L	500	516	103	80-120	
Zinc	ug/L	500	502	100	80-120	

MATRIX SPIKE SAMPLE: 523419

Parameter	Units	9280732014 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	ND	500	465	93	75-125	
Arsenic	ug/L	ND	500	476	95	75-125	

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QUALITY CONTROL DATA

Project: White Oak LF 10/26/10
Pace Project No.: 9280732

MATRIX SPIKE SAMPLE: 523419

Parameter	Units	9280732014 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	190	500	642	90	75-125	
Beryllium	ug/L	ND	500	495	99	75-125	
Cadmium	ug/L	ND	500	457	91	75-125	
Chromium	ug/L	ND	500	463	92	75-125	
Cobalt	ug/L	ND	500	453	91	75-125	
Copper	ug/L	ND	500	474	95	75-125	
Lead	ug/L	ND	500	447	89	75-125	
Nickel	ug/L	ND	500	444	89	75-125	
Selenium	ug/L	ND	500	464	93	75-125	
Silver	ug/L	ND	250	213	85	75-125	
Thallium	ug/L	ND	500	453	91	75-125	
Vanadium	ug/L	ND	500	470	94	75-125	
Zinc	ug/L	ND	500	459	92	75-125	

SAMPLE DUPLICATE: 523420

Parameter	Units	9280732015 Result	Dup Result	RPD	Qualifiers
Antimony	ug/L	ND	ND		
Arsenic	ug/L	ND	ND		
Barium	ug/L	147	151	3	
Beryllium	ug/L	ND	ND		
Cadmium	ug/L	ND	ND		
Chromium	ug/L	10.1	10.7	6	
Cobalt	ug/L	ND	3.6J		
Copper	ug/L	6.7	6.9	4	
Lead	ug/L	ND	ND		
Nickel	ug/L	7.0	7.1	1	
Selenium	ug/L	ND	ND		
Silver	ug/L	ND	ND		
Thallium	ug/L	ND	ND		
Vanadium	ug/L	17.4	17.9	3	
Zinc	ug/L	19.1	16.4	15	

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QUALITY CONTROL DATA

Project: White Oak LF 10/26/10
Pace Project No.: 9280732

QC Batch: MPRP/7360
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Associated Lab Samples: 9280732007

METHOD BLANK: 522661
Matrix: Water
Associated Lab Samples: 9280732007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	ug/L	ND	5.0	11/04/10 20:24	
Arsenic	ug/L	ND	5.0	11/04/10 20:24	
Barium	ug/L	ND	5.0	11/04/10 20:24	
Beryllium	ug/L	ND	1.0	11/04/10 20:24	
Cadmium	ug/L	ND	1.0	11/04/10 20:24	
Chromium	ug/L	ND	5.0	11/04/10 20:24	
Cobalt	ug/L	ND	5.0	11/04/10 20:24	
Copper	ug/L	ND	5.0	11/04/10 20:24	
Lead	ug/L	ND	5.0	11/04/10 20:24	
Nickel	ug/L	ND	5.0	11/04/10 20:24	
Selenium	ug/L	ND	10.0	11/04/10 20:24	
Silver	ug/L	ND	5.0	11/04/10 20:24	
Thallium	ug/L	ND	10.0	11/04/10 20:24	
Vanadium	ug/L	ND	5.0	11/04/10 20:24	
Zinc	ug/L	ND	10.0	11/04/10 20:24	

LABORATORY CONTROL SAMPLE: 522662

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	500	473	95	80-120	
Arsenic	ug/L	500	471	94	80-120	
Barium	ug/L	500	473	95	80-120	
Beryllium	ug/L	500	478	96	80-120	
Cadmium	ug/L	500	478	96	80-120	
Chromium	ug/L	500	479	96	80-120	
Cobalt	ug/L	500	473	95	80-120	
Copper	ug/L	500	471	94	80-120	
Lead	ug/L	500	471	94	80-120	
Nickel	ug/L	500	473	95	80-120	
Selenium	ug/L	500	459	92	80-120	
Silver	ug/L	250	227	91	80-120	
Thallium	ug/L	500	458	92	80-120	
Vanadium	ug/L	500	483	97	80-120	
Zinc	ug/L	500	463	93	80-120	

MATRIX SPIKE SAMPLE: 522663

Parameter	Units	9280726009 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	ND	500	478	95	75-125	
Arsenic	ug/L	2.7J	500	479	95	75-125	

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QUALITY CONTROL DATA

Project: White Oak LF 10/26/10
Pace Project No.: 9280732

MATRIX SPIKE SAMPLE: 522663

Parameter	Units	9280726009 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	25.6	500	501	95	75-125	
Beryllium	ug/L	ND	500	495	99	75-125	
Cadmium	ug/L	ND	500	486	97	75-125	
Chromium	ug/L	ND	500	494	99	75-125	
Cobalt	ug/L	ND	500	482	96	75-125	
Copper	ug/L	0.48J	500	478	96	75-125	
Lead	ug/L	ND	500	472	94	75-125	
Nickel	ug/L	ND	500	483	97	75-125	
Selenium	ug/L	4.1J	500	465	92	75-125	
Silver	ug/L	ND	250	231	92	75-125	
Thallium	ug/L	5.9J	500	466	92	75-125	
Vanadium	ug/L	0.72J	500	495	99	75-125	
Zinc	ug/L	4.9J	500	476	94	75-125	

SAMPLE DUPLICATE: 522664

Parameter	Units	9280726010 Result	Dup Result	RPD	Qualifiers
Antimony	ug/L	ND	ND		
Arsenic	ug/L	ND	ND		
Barium	ug/L	98.7	95.0	4	
Beryllium	ug/L	0.53J	.44J		
Cadmium	ug/L	ND	ND		
Chromium	ug/L	2.5J	2.3J		
Cobalt	ug/L	2.3J	2.2J		
Copper	ug/L	2.2J	2.2J		
Lead	ug/L	ND	ND		
Nickel	ug/L	4.3J	4J		
Selenium	ug/L	ND	ND		
Silver	ug/L	ND	ND		
Thallium	ug/L	5.5J	ND		
Vanadium	ug/L	3.4J	2.9J		
Zinc	ug/L	25.4	24.7	3	

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QUALITY CONTROL DATA

Project: White Oak LF 10/26/10
Pace Project No.: 9280732

QC Batch: MSV/12840 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV Low Level
Associated Lab Samples: 9280732001, 9280732002, 9280732003, 9280732004, 9280732005, 9280732006, 9280732007, 9280732008, 9280732009, 9280732010, 9280732011, 9280732012

METHOD BLANK: 519286 Matrix: Water
Associated Lab Samples: 9280732001, 9280732002, 9280732003, 9280732004, 9280732005, 9280732006, 9280732007, 9280732008, 9280732009, 9280732010, 9280732011, 9280732012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	10/29/10 10:44	
1,1,1-Trichloroethane	ug/L	ND	1.0	10/29/10 10:44	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	10/29/10 10:44	
1,1,2-Trichloroethane	ug/L	ND	1.0	10/29/10 10:44	
1,1-Dichloroethane	ug/L	ND	1.0	10/29/10 10:44	
1,1-Dichloroethene	ug/L	ND	1.0	10/29/10 10:44	
1,1-Dichloropropene	ug/L	ND	1.0	10/29/10 10:44	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	10/29/10 10:44	
1,2,3-Trichloropropane	ug/L	ND	1.0	10/29/10 10:44	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	10/29/10 10:44	
1,2-Dibromo-3-chloropropane	ug/L	ND	5.0	10/29/10 10:44	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	10/29/10 10:44	
1,2-Dichlorobenzene	ug/L	ND	1.0	10/29/10 10:44	
1,2-Dichloroethane	ug/L	ND	1.0	10/29/10 10:44	
1,2-Dichloropropane	ug/L	ND	1.0	10/29/10 10:44	
1,3-Dichlorobenzene	ug/L	ND	1.0	10/29/10 10:44	
1,3-Dichloropropane	ug/L	ND	1.0	10/29/10 10:44	
1,4-Dichlorobenzene	ug/L	ND	1.0	10/29/10 10:44	
2,2-Dichloropropane	ug/L	ND	1.0	10/29/10 10:44	
2-Butanone (MEK)	ug/L	ND	5.0	10/29/10 10:44	
2-Chlorotoluene	ug/L	ND	1.0	10/29/10 10:44	
2-Hexanone	ug/L	ND	5.0	10/29/10 10:44	
4-Chlorotoluene	ug/L	ND	1.0	10/29/10 10:44	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	10/29/10 10:44	
Acetone	ug/L	ND	25.0	10/29/10 10:44	
Acrylonitrile	ug/L	ND	10.0	10/29/10 10:44	
Benzene	ug/L	ND	1.0	10/29/10 10:44	
Bromobenzene	ug/L	ND	1.0	10/29/10 10:44	
Bromochloromethane	ug/L	ND	1.0	10/29/10 10:44	
Bromodichloromethane	ug/L	ND	1.0	10/29/10 10:44	
Bromoform	ug/L	ND	1.0	10/29/10 10:44	
Bromomethane	ug/L	ND	2.0	10/29/10 10:44	
Carbon disulfide	ug/L	ND	2.0	10/29/10 10:44	
Carbon tetrachloride	ug/L	ND	1.0	10/29/10 10:44	
Chlorobenzene	ug/L	ND	1.0	10/29/10 10:44	
Chloroethane	ug/L	ND	1.0	10/29/10 10:44	
Chloroform	ug/L	ND	1.0	10/29/10 10:44	
Chloromethane	ug/L	ND	1.0	10/29/10 10:44	
cis-1,2-Dichloroethene	ug/L	ND	1.0	10/29/10 10:44	
cis-1,3-Dichloropropene	ug/L	ND	1.0	10/29/10 10:44	
Dibromochloromethane	ug/L	ND	1.0	10/29/10 10:44	

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QUALITY CONTROL DATA

Project: White Oak LF 10/26/10
Pace Project No.: 9280732

METHOD BLANK: 519286 Matrix: Water

Associated Lab Samples: 9280732001, 9280732002, 9280732003, 9280732004, 9280732005, 9280732006, 9280732007, 9280732008, 9280732009, 9280732010, 9280732011, 9280732012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Dibromomethane	ug/L	ND	1.0	10/29/10 10:44	
Dichlorodifluoromethane	ug/L	ND	1.0	10/29/10 10:44	
Diisopropyl ether	ug/L	ND	1.0	10/29/10 10:44	
Ethylbenzene	ug/L	ND	1.0	10/29/10 10:44	
Hexachloro-1,3-butadiene	ug/L	ND	1.0	10/29/10 10:44	
Iodomethane	ug/L	ND	5.0	10/29/10 10:44	
m&p-Xylene	ug/L	ND	2.0	10/29/10 10:44	
Methyl-tert-butyl ether	ug/L	ND	1.0	10/29/10 10:44	
Methylene Chloride	ug/L	3.9	2.0	10/29/10 10:44	C9
Naphthalene	ug/L	ND	1.0	10/29/10 10:44	
o-Xylene	ug/L	ND	1.0	10/29/10 10:44	
p-Isopropyltoluene	ug/L	ND	1.0	10/29/10 10:44	
Styrene	ug/L	ND	1.0	10/29/10 10:44	
Tetrachloroethene	ug/L	ND	1.0	10/29/10 10:44	
Toluene	ug/L	ND	1.0	10/29/10 10:44	
trans-1,2-Dichloroethene	ug/L	ND	1.0	10/29/10 10:44	
trans-1,3-Dichloropropene	ug/L	ND	1.0	10/29/10 10:44	
trans-1,4-Dichloro-2-butene	ug/L	ND	1.0	10/29/10 10:44	
Trichloroethene	ug/L	ND	1.0	10/29/10 10:44	
Trichlorofluoromethane	ug/L	ND	1.0	10/29/10 10:44	
Vinyl acetate	ug/L	ND	2.0	10/29/10 10:44	
Vinyl chloride	ug/L	ND	1.0	10/29/10 10:44	
Xylene (Total)	ug/L	ND	2.0	10/29/10 10:44	
1,2-Dichloroethane-d4 (S)	%	106	70-130	10/29/10 10:44	
4-Bromofluorobenzene (S)	%	96	70-130	10/29/10 10:44	
Dibromofluoromethane (S)	%	102	70-130	10/29/10 10:44	
Toluene-d8 (S)	%	104	70-130	10/29/10 10:44	

LABORATORY CONTROL SAMPLE: 519287

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	49.9	100	70-130	
1,1,1-Trichloroethane	ug/L	50	52.5	105	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	55.6	111	70-130	
1,1,2-Trichloroethane	ug/L	50	55.8	112	70-130	
1,1-Dichloroethane	ug/L	50	54.5	109	70-130	
1,1-Dichloroethene	ug/L	50	51.1	102	70-132	
1,1-Dichloropropene	ug/L	50	46.1	92	70-130	
1,2,3-Trichlorobenzene	ug/L	50	52.4	105	70-135	
1,2,3-Trichloropropane	ug/L	50	46.3	93	70-130	
1,2,4-Trichlorobenzene	ug/L	50	52.4	105	70-134	
1,2-Dibromo-3-chloropropane	ug/L	50	49.8	100	70-130	
1,2-Dibromoethane (EDB)	ug/L	50	50.8	102	70-130	
1,2-Dichlorobenzene	ug/L	50	52.5	105	70-130	

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QUALITY CONTROL DATA

Project: White Oak LF 10/26/10
Pace Project No.: 9280732

LABORATORY CONTROL SAMPLE: 519287

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	50	56.0	112	70-130	
1,2-Dichloropropane	ug/L	50	59.0	118	70-130	
1,3-Dichlorobenzene	ug/L	50	51.5	103	70-130	
1,3-Dichloropropane	ug/L	50	50.3	101	70-130	
1,4-Dichlorobenzene	ug/L	50	52.4	105	70-130	
2,2-Dichloropropane	ug/L	50	38.1	76	58-145	
2-Butanone (MEK)	ug/L	100	98.4	98	70-145	
2-Chlorotoluene	ug/L	50	51.9	104	70-130	
2-Hexanone	ug/L	100	100	100	70-144	
4-Chlorotoluene	ug/L	50	56.1	112	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	100	113	113	70-140	
Acetone	ug/L	100	99.8	100	50-175	
Acrylonitrile	ug/L	250	256	102	70-143	
Benzene	ug/L	50	55.2	110	70-130	
Bromobenzene	ug/L	50	49.9	100	70-130	
Bromochloromethane	ug/L	50	53.0	106	70-130	
Bromodichloromethane	ug/L	50	53.8	108	70-130	
Bromoform	ug/L	50	54.7	109	70-130	
Bromomethane	ug/L	50	53.5	107	54-130	
Carbon disulfide	ug/L	50	57.2	114	70-131	
Carbon tetrachloride	ug/L	50	54.2	108	70-132	
Chlorobenzene	ug/L	50	51.2	102	70-130	
Chloroethane	ug/L	50	51.9	104	64-134	
Chloroform	ug/L	50	53.0	106	70-130	
Chloromethane	ug/L	50	54.2	108	64-130	
cis-1,2-Dichloroethene	ug/L	50	51.9	104	70-131	
cis-1,3-Dichloropropene	ug/L	50	50.9	102	70-130	
Dibromochloromethane	ug/L	50	49.4	99	70-130	
Dibromomethane	ug/L	50	53.9	108	70-131	
Dichlorodifluoromethane	ug/L	50	47.6	95	56-130	
Diisopropyl ether	ug/L	50	55.3	111	70-130	
Ethylbenzene	ug/L	50	49.4	99	70-130	
Hexachloro-1,3-butadiene	ug/L	50	48.7	97	70-130	
Iodomethane	ug/L	100	105	105	49-180	
m&p-Xylene	ug/L	100	89.6	90	70-130	
Methyl-tert-butyl ether	ug/L	50	48.5	97	70-130	
Methylene Chloride	ug/L	50	44.8	90	63-130	
Naphthalene	ug/L	50	47.3	95	70-138	
o-Xylene	ug/L	50	45.8	92	70-130	
p-Isopropyltoluene	ug/L	50	46.5	93	70-130	
Styrene	ug/L	50	48.2	96	70-130	
Tetrachloroethene	ug/L	50	48.1	96	70-130	
Toluene	ug/L	50	51.9	104	70-130	
trans-1,2-Dichloroethene	ug/L	50	51.7	103	70-130	
trans-1,3-Dichloropropene	ug/L	50	53.3	107	70-132	
trans-1,4-Dichloro-2-butene	ug/L	50	39.0	78	70-141	
Trichloroethene	ug/L	50	53.6	107	70-130	
Trichlorofluoromethane	ug/L	50	49.1	98	62-133	

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QUALITY CONTROL DATA

Project: White Oak LF 10/26/10
Pace Project No.: 9280732

LABORATORY CONTROL SAMPLE: 519287

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Vinyl acetate	ug/L	100	105	105	66-157	
Vinyl chloride	ug/L	50	59.0	118	69-130	
Xylene (Total)	ug/L	150	135	90	70-130	
1,2-Dichloroethane-d4 (S)	%			97	70-130	
4-Bromofluorobenzene (S)	%			102	70-130	
Dibromofluoromethane (S)	%			101	70-130	
Toluene-d8 (S)	%			101	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 520467 520468

Parameter	Units	9280732001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
1,1-Dichloroethene	ug/L	ND	50	50	53.6	52.9	107	106	70-166	1	
Benzene	ug/L	ND	50	50	56.6	53.8	113	108	70-148	5	
Chlorobenzene	ug/L	ND	50	50	54.0	53.9	108	108	70-146	0	
Toluene	ug/L	ND	50	50	54.0	52.5	108	105	70-155	3	
Trichloroethene	ug/L	ND	50	50	53.8	52.4	108	105	69-151	3	
1,2-Dichloroethane-d4 (S)	%						103	106	70-130		
4-Bromofluorobenzene (S)	%						95	95	70-130		
Dibromofluoromethane (S)	%						99	100	70-130		
Toluene-d8 (S)	%						100	100	70-130		

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QUALITY CONTROL DATA

Project: White Oak LF 10/26/10
Pace Project No.: 9280732

QC Batch: MSV/12843
Analysis Method: EPA 8260
QC Batch Method: EPA 8260
Analysis Description: 8260 MSV Low Level
Associated Lab Samples: 9280732021, 9280732022

METHOD BLANK: 519328
Matrix: Water
Associated Lab Samples: 9280732021, 9280732022

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	10/29/10 01:28	
1,1,1-Trichloroethane	ug/L	ND	1.0	10/29/10 01:28	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	10/29/10 01:28	
1,1,2-Trichloroethane	ug/L	ND	1.0	10/29/10 01:28	
1,1-Dichloroethane	ug/L	ND	1.0	10/29/10 01:28	
1,1-Dichloroethene	ug/L	ND	1.0	10/29/10 01:28	
1,2,3-Trichloropropane	ug/L	ND	1.0	10/29/10 01:28	
1,2-Dibromo-3-chloropropane	ug/L	ND	5.0	10/29/10 01:28	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	10/29/10 01:28	
1,2-Dichlorobenzene	ug/L	ND	1.0	10/29/10 01:28	
1,2-Dichloroethane	ug/L	ND	1.0	10/29/10 01:28	
1,2-Dichloropropane	ug/L	ND	1.0	10/29/10 01:28	
1,4-Dichlorobenzene	ug/L	ND	1.0	10/29/10 01:28	
2-Butanone (MEK)	ug/L	ND	5.0	10/29/10 01:28	
2-Hexanone	ug/L	ND	5.0	10/29/10 01:28	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	10/29/10 01:28	
Acetone	ug/L	ND	25.0	10/29/10 01:28	
Acrylonitrile	ug/L	ND	10.0	10/29/10 01:28	
Benzene	ug/L	ND	1.0	10/29/10 01:28	
Bromochloromethane	ug/L	ND	1.0	10/29/10 01:28	
Bromodichloromethane	ug/L	ND	1.0	10/29/10 01:28	
Bromoform	ug/L	ND	1.0	10/29/10 01:28	
Bromomethane	ug/L	ND	2.0	10/29/10 01:28	
Carbon disulfide	ug/L	ND	2.0	10/29/10 01:28	
Carbon tetrachloride	ug/L	ND	1.0	10/29/10 01:28	
Chlorobenzene	ug/L	ND	1.0	10/29/10 01:28	
Chloroethane	ug/L	ND	1.0	10/29/10 01:28	
Chloroform	ug/L	ND	1.0	10/29/10 01:28	
Chloromethane	ug/L	ND	1.0	10/29/10 01:28	
cis-1,2-Dichloroethene	ug/L	ND	1.0	10/29/10 01:28	
cis-1,3-Dichloropropene	ug/L	ND	1.0	10/29/10 01:28	
Dibromochloromethane	ug/L	ND	1.0	10/29/10 01:28	
Dibromomethane	ug/L	ND	1.0	10/29/10 01:28	
Ethylbenzene	ug/L	ND	1.0	10/29/10 01:28	
Iodomethane	ug/L	ND	5.0	10/29/10 01:28	
m&p-Xylene	ug/L	ND	2.0	10/29/10 01:28	
Methylene Chloride	ug/L	ND	2.0	10/29/10 01:28	
o-Xylene	ug/L	ND	1.0	10/29/10 01:28	
Styrene	ug/L	ND	1.0	10/29/10 01:28	
Tetrachloroethene	ug/L	ND	1.0	10/29/10 01:28	
Toluene	ug/L	ND	1.0	10/29/10 01:28	
trans-1,2-Dichloroethene	ug/L	ND	1.0	10/29/10 01:28	
trans-1,3-Dichloropropene	ug/L	ND	1.0	10/29/10 01:28	

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QUALITY CONTROL DATA

Project: White Oak LF 10/26/10
Pace Project No.: 9280732

METHOD BLANK: 519328 Matrix: Water

Associated Lab Samples: 9280732021, 9280732022

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
trans-1,4-Dichloro-2-butene	ug/L	ND	1.0	10/29/10 01:28	
Trichloroethene	ug/L	ND	1.0	10/29/10 01:28	
Trichlorofluoromethane	ug/L	ND	1.0	10/29/10 01:28	
Vinyl acetate	ug/L	ND	2.0	10/29/10 01:28	
Vinyl chloride	ug/L	ND	1.0	10/29/10 01:28	
Xylene (Total)	ug/L	ND	2.0	10/29/10 01:28	
1,2-Dichloroethane-d4 (S)	%	108	70-130	10/29/10 01:28	
4-Bromofluorobenzene (S)	%	101	70-130	10/29/10 01:28	
Dibromofluoromethane (S)	%	102	70-130	10/29/10 01:28	
Toluene-d8 (S)	%	98	70-130	10/29/10 01:28	

LABORATORY CONTROL SAMPLE: 519329

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	56.2	112	70-130	
1,1,1-Trichloroethane	ug/L	50	51.2	102	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	49.4	99	70-130	
1,1,2-Trichloroethane	ug/L	50	51.0	102	70-130	
1,1-Dichloroethane	ug/L	50	48.3	97	70-130	
1,1-Dichloroethene	ug/L	50	46.7	93	70-132	
1,2,3-Trichloropropane	ug/L	50	48.8	98	70-130	
1,2-Dibromo-3-chloropropane	ug/L	50	51.2	102	70-130	
1,2-Dibromoethane (EDB)	ug/L	50	51.6	103	70-130	
1,2-Dichlorobenzene	ug/L	50	50.6	101	70-130	
1,2-Dichloroethane	ug/L	50	50.9	102	70-130	
1,2-Dichloropropane	ug/L	50	45.3	91	70-130	
1,4-Dichlorobenzene	ug/L	50	49.6	99	70-130	
2-Butanone (MEK)	ug/L	100	86.5	86	70-145	
2-Hexanone	ug/L	100	86.1	86	70-144	
4-Methyl-2-pentanone (MIBK)	ug/L	100	94.9	95	70-140	
Acetone	ug/L	100	99.5	99	50-175	
Acrylonitrile	ug/L	250	237	95	70-143	
Benzene	ug/L	50	46.0	92	70-130	
Bromochloromethane	ug/L	50	52.3	105	70-130	
Bromodichloromethane	ug/L	50	54.9	110	70-130	
Bromoform	ug/L	50	49.5	99	70-130	
Bromomethane	ug/L	50	61.8	124	54-130	
Carbon disulfide	ug/L	50	53.4	107	70-131	
Carbon tetrachloride	ug/L	50	56.2	112	70-132	
Chlorobenzene	ug/L	50	50.1	100	70-130	
Chloroethane	ug/L	50	48.9	98	64-134	
Chloroform	ug/L	50	51.3	103	70-130	
Chloromethane	ug/L	50	38.3	77	64-130	
cis-1,2-Dichloroethene	ug/L	50	48.7	97	70-131	
cis-1,3-Dichloropropene	ug/L	50	50.9	102	70-130	

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QUALITY CONTROL DATA

Project: White Oak LF 10/26/10
Pace Project No.: 9280732

LABORATORY CONTROL SAMPLE: 519329

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dibromochloromethane	ug/L	50	56.8	114	70-130	
Dibromomethane	ug/L	50	54.0	108	70-131	
Ethylbenzene	ug/L	50	52.1	104	70-130	
Iodomethane	ug/L	100	116	116	49-180	
m&p-Xylene	ug/L	100	107	107	70-130	
Methylene Chloride	ug/L	50	43.1	86	63-130	
o-Xylene	ug/L	50	53.9	108	70-130	
Styrene	ug/L	50	53.6	107	70-130	
Tetrachloroethene	ug/L	50	51.2	102	70-130	
Toluene	ug/L	50	48.8	98	70-130	
trans-1,2-Dichloroethene	ug/L	50	46.5	93	70-130	
trans-1,3-Dichloropropene	ug/L	50	45.8	92	70-132	
trans-1,4-Dichloro-2-butene	ug/L	50	47.8	96	70-141	
Trichloroethene	ug/L	50	49.3	99	70-130	
Trichlorofluoromethane	ug/L	50	47.1	94	62-133	
Vinyl acetate	ug/L	100	96.7	97	66-157	
Vinyl chloride	ug/L	50	49.4	99	69-130	
Xylene (Total)	ug/L	150	161	107	70-130	
1,2-Dichloroethane-d4 (S)	%			102	70-130	
4-Bromofluorobenzene (S)	%			108	70-130	
Dibromofluoromethane (S)	%			100	70-130	
Toluene-d8 (S)	%			99	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 519330 519331

Parameter	Units	9280782008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
1,1-Dichloroethene	ug/L	ND	50	50	56.5	56.9	113	114	70-166	1	
Benzene	ug/L	ND	50	50	51.1	51.5	102	103	70-148	1	
Chlorobenzene	ug/L	ND	50	50	52.7	52.1	105	104	70-146	1	
Toluene	ug/L	ND	50	50	53.6	53.6	107	107	70-155	0	
Trichloroethene	ug/L	ND	50	50	56.3	56.2	113	112	69-151	0	
1,2-Dichloroethane-d4 (S)	%						115	118	70-130		
4-Bromofluorobenzene (S)	%						101	101	70-130		
Dibromofluoromethane (S)	%						105	108	70-130		
Toluene-d8 (S)	%						98	96	70-130		

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QUALITY CONTROL DATA

Project: White Oak LF 10/26/10
Pace Project No.: 9280732

QC Batch: MSV/12859 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV Low Level
Associated Lab Samples: 9280732013, 9280732014, 9280732015, 9280732016, 9280732017, 9280732018, 9280732019, 9280732020

METHOD BLANK: 520469 Matrix: Water
Associated Lab Samples: 9280732013, 9280732014, 9280732015, 9280732016, 9280732017, 9280732018, 9280732019, 9280732020

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	10/31/10 10:59	
1,1,1-Trichloroethane	ug/L	ND	1.0	10/31/10 10:59	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	10/31/10 10:59	
1,1,2-Trichloroethane	ug/L	ND	1.0	10/31/10 10:59	
1,1-Dichloroethane	ug/L	ND	1.0	10/31/10 10:59	
1,1-Dichloroethene	ug/L	ND	1.0	10/31/10 10:59	
1,2,3-Trichloropropane	ug/L	ND	1.0	10/31/10 10:59	
1,2-Dibromo-3-chloropropane	ug/L	ND	5.0	10/31/10 10:59	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	10/31/10 10:59	
1,2-Dichlorobenzene	ug/L	ND	1.0	10/31/10 10:59	
1,2-Dichloroethane	ug/L	ND	1.0	10/31/10 10:59	
1,2-Dichloropropane	ug/L	ND	1.0	10/31/10 10:59	
1,4-Dichlorobenzene	ug/L	ND	1.0	10/31/10 10:59	
2-Butanone (MEK)	ug/L	ND	5.0	10/31/10 10:59	
2-Hexanone	ug/L	ND	5.0	10/31/10 10:59	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	10/31/10 10:59	
Acetone	ug/L	ND	25.0	10/31/10 10:59	
Acrylonitrile	ug/L	ND	10.0	10/31/10 10:59	
Benzene	ug/L	ND	1.0	10/31/10 10:59	
Bromochloromethane	ug/L	ND	1.0	10/31/10 10:59	
Bromodichloromethane	ug/L	ND	1.0	10/31/10 10:59	
Bromoform	ug/L	ND	1.0	10/31/10 10:59	
Bromomethane	ug/L	ND	2.0	10/31/10 10:59	
Carbon disulfide	ug/L	ND	2.0	10/31/10 10:59	
Carbon tetrachloride	ug/L	ND	1.0	10/31/10 10:59	
Chlorobenzene	ug/L	ND	1.0	10/31/10 10:59	
Chloroethane	ug/L	ND	1.0	10/31/10 10:59	
Chloroform	ug/L	ND	1.0	10/31/10 10:59	
Chloromethane	ug/L	ND	1.0	10/31/10 10:59	
cis-1,2-Dichloroethene	ug/L	ND	1.0	10/31/10 10:59	
cis-1,3-Dichloropropene	ug/L	ND	1.0	10/31/10 10:59	
Dibromochloromethane	ug/L	ND	1.0	10/31/10 10:59	
Dibromomethane	ug/L	ND	1.0	10/31/10 10:59	
Ethylbenzene	ug/L	ND	1.0	10/31/10 10:59	
Iodomethane	ug/L	ND	5.0	10/31/10 10:59	
m&p-Xylene	ug/L	ND	2.0	10/31/10 10:59	
Methylene Chloride	ug/L	ND	2.0	10/31/10 10:59	
o-Xylene	ug/L	ND	1.0	10/31/10 10:59	
Styrene	ug/L	ND	1.0	10/31/10 10:59	
Tetrachloroethene	ug/L	ND	1.0	10/31/10 10:59	
Toluene	ug/L	ND	1.0	10/31/10 10:59	
trans-1,2-Dichloroethene	ug/L	ND	1.0	10/31/10 10:59	
trans-1,3-Dichloropropene	ug/L	ND	1.0	10/31/10 10:59	

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QUALITY CONTROL DATA

Project: White Oak LF 10/26/10
Pace Project No.: 9280732

METHOD BLANK: 520469 Matrix: Water

Associated Lab Samples: 9280732013, 9280732014, 9280732015, 9280732016, 9280732017, 9280732018, 9280732019, 9280732020

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
trans-1,4-Dichloro-2-butene	ug/L	ND	1.0	10/31/10 10:59	
Trichloroethene	ug/L	ND	1.0	10/31/10 10:59	
Trichlorofluoromethane	ug/L	ND	1.0	10/31/10 10:59	
Vinyl acetate	ug/L	ND	2.0	10/31/10 10:59	
Vinyl chloride	ug/L	ND	1.0	10/31/10 10:59	
Xylene (Total)	ug/L	ND	2.0	10/31/10 10:59	
1,2-Dichloroethane-d4 (S)	%	103	70-130	10/31/10 10:59	
4-Bromofluorobenzene (S)	%	87	70-130	10/31/10 10:59	
Dibromofluoromethane (S)	%	96	70-130	10/31/10 10:59	
Toluene-d8 (S)	%	103	70-130	10/31/10 10:59	

LABORATORY CONTROL SAMPLE: 520470

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	45.7	91	70-130	
1,1,1-Trichloroethane	ug/L	50	44.0	88	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	52.3	105	70-130	
1,1,2-Trichloroethane	ug/L	50	45.6	91	70-130	
1,1-Dichloroethane	ug/L	50	46.3	93	70-130	
1,1-Dichloroethene	ug/L	50	42.7	85	70-132	
1,2,3-Trichloropropane	ug/L	50	43.5	87	70-130	
1,2-Dibromo-3-chloropropane	ug/L	50	48.0	96	70-130	
1,2-Dibromoethane (EDB)	ug/L	50	45.7	91	70-130	
1,2-Dichlorobenzene	ug/L	50	47.1	94	70-130	
1,2-Dichloroethane	ug/L	50	48.1	96	70-130	
1,2-Dichloropropane	ug/L	50	46.8	94	70-130	
1,4-Dichlorobenzene	ug/L	50	45.7	91	70-130	
2-Butanone (MEK)	ug/L	100	104	104	70-145	
2-Hexanone	ug/L	100	103	103	70-144	
4-Methyl-2-pentanone (MIBK)	ug/L	100	104	104	70-140	
Acetone	ug/L	100	122	122	50-175	
Acrylonitrile	ug/L	250	234	94	70-143	
Benzene	ug/L	50	44.6	89	70-130	
Bromochloromethane	ug/L	50	45.3	91	70-130	
Bromodichloromethane	ug/L	50	43.6	87	70-130	
Bromoform	ug/L	50	49.1	98	70-130	
Bromomethane	ug/L	50	47.9	96	54-130	
Carbon disulfide	ug/L	50	48.0	96	70-131	
Carbon tetrachloride	ug/L	50	44.1	88	70-132	
Chlorobenzene	ug/L	50	44.6	89	70-130	
Chloroethane	ug/L	50	45.0	90	64-134	
Chloroform	ug/L	50	45.5	91	70-130	
Chloromethane	ug/L	50	44.8	90	64-130	
cis-1,2-Dichloroethene	ug/L	50	44.4	89	70-131	
cis-1,3-Dichloropropene	ug/L	50	43.7	87	70-130	

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QUALITY CONTROL DATA

Project: White Oak LF 10/26/10
Pace Project No.: 9280732

LABORATORY CONTROL SAMPLE: 520470

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dibromochloromethane	ug/L	50	46.0	92	70-130	
Dibromomethane	ug/L	50	44.2	88	70-131	
Ethylbenzene	ug/L	50	44.7	89	70-130	
Iodomethane	ug/L	100	88.8	89	49-180	
m&p-Xylene	ug/L	100	80.8	81	70-130	
Methylene Chloride	ug/L	50	37.2	74	63-130	
o-Xylene	ug/L	50	40.6	81	70-130	
Styrene	ug/L	50	42.0	84	70-130	
Tetrachloroethene	ug/L	50	45.4	91	70-130	
Toluene	ug/L	50	42.6	85	70-130	
trans-1,2-Dichloroethene	ug/L	50	43.8	88	70-130	
trans-1,3-Dichloropropene	ug/L	50	48.5	97	70-132	
trans-1,4-Dichloro-2-butene	ug/L	50	47.3	95	70-141	
Trichloroethene	ug/L	50	45.3	91	70-130	
Trichlorofluoromethane	ug/L	50	40.1	80	62-133	
Vinyl acetate	ug/L	100	102	102	66-157	
Vinyl chloride	ug/L	50	49.2	98	69-130	
Xylene (Total)	ug/L	150	121	81	70-130	
1,2-Dichloroethane-d4 (S)	%			109	70-130	
4-Bromofluorobenzene (S)	%			102	70-130	
Dibromofluoromethane (S)	%			102	70-130	
Toluene-d8 (S)	%			100	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 520471 520472

Parameter	Units	9280732019 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
1,1-Dichloroethene	ug/L	ND	50	50	58.0	55.0	116	110	70-166	5	
Benzene	ug/L	ND	50	50	56.9	56.3	114	113	70-148	1	
Chlorobenzene	ug/L	ND	50	50	59.6	55.8	119	112	70-146	7	
Toluene	ug/L	ND	50	50	54.9	54.2	110	108	70-155	1	
Trichloroethene	ug/L	ND	50	50	54.4	53.2	109	106	69-151	2	
1,2-Dichloroethane-d4 (S)	%						107	108	70-130		
4-Bromofluorobenzene (S)	%						95	93	70-130		
Dibromofluoromethane (S)	%						102	100	70-130		
Toluene-d8 (S)	%						96	100	70-130		

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QUALITY CONTROL DATA

Project: White Oak LF 10/26/10
Pace Project No.: 9280732

QC Batch: WET/14250
QC Batch Method: SM 5210B
Analysis Method: SM 5210B
Analysis Description: 5210B BOD, 5 day
Associated Lab Samples: 9280732007

METHOD BLANK: 518971
Matrix: Water
Associated Lab Samples: 9280732007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	ND	2.0	11/01/10 13:38	

LABORATORY CONTROL SAMPLE: 518972

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	189	95	84-115	

SAMPLE DUPLICATE: 518973

Parameter	Units	9280665002 Result	Dup Result	RPD	Qualifiers
BOD, 5 day	mg/L	681	672	1	

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QUALITY CONTROL DATA

Project: White Oak LF 10/26/10
Pace Project No.: 9280732

QC Batch: WETA/8543
QC Batch Method: EPA 300.0
Analysis Method: EPA 300.0
Analysis Description: 300.0 IC Anions
Associated Lab Samples: 9280732007

METHOD BLANK: 524331
Matrix: Water
Associated Lab Samples: 9280732007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfate	mg/L	ND	5.0	11/09/10 19:49	

LABORATORY CONTROL SAMPLE: 524332

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	30	29.5	98	90-110	

MATRIX SPIKE SAMPLE: 524333

Parameter	Units	9280726002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	ND	30	28.4	95	90-110	

MATRIX SPIKE SAMPLE: 524335

Parameter	Units	9280690001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	156	750	895	99	90-110	D3

SAMPLE DUPLICATE: 524334

Parameter	Units	9280726002 Result	Dup Result	RPD	Qualifiers
Sulfate	mg/L	ND	ND		

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QUALITY CONTROL DATA

Project: White Oak LF 10/26/10
Pace Project No.: 9280732

QC Batch: WETA/8460
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Associated Lab Samples: 9280732007

METHOD BLANK: 518986
Matrix: Water
Associated Lab Samples: 9280732007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.10	10/28/10 00:23	
Nitrogen, Nitrite	mg/L	ND	0.10	10/28/10 00:23	
Nitrogen, NO2 plus NO3	mg/L	ND	0.10	10/28/10 00:23	

LABORATORY CONTROL SAMPLE: 518987

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	5	5.4	108	90-110	
Nitrogen, Nitrite	mg/L	1	1.0	104	90-110	
Nitrogen, NO2 plus NO3	mg/L	5	5.4	108	90-110	

MATRIX SPIKE SAMPLE: 518988

Parameter	Units	9280793003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	9.0	5	14.1	102	90-110	
Nitrogen, Nitrite	mg/L	0.39	1	1.3	93	90-110	
Nitrogen, NO2 plus NO3	mg/L	9.4	5	14.1	94	90-110	

MATRIX SPIKE SAMPLE: 518990

Parameter	Units	9280793001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	8.1	5	15.3	143	90-110	M1
Nitrogen, Nitrite	mg/L	0.40	1	1.4	100	90-110	
Nitrogen, NO2 plus NO3	mg/L	8.5	5	15.3	135	90-110	M1

SAMPLE DUPLICATE: 518989

Parameter	Units	9280793003 Result	Dup Result	RPD	Qualifiers
Nitrogen, Nitrate	mg/L	9.0	9.3	3	
Nitrogen, Nitrite	mg/L	0.39	0.37	6	
Nitrogen, NO2 plus NO3	mg/L	9.4	9.3	1	

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QUALITY CONTROL DATA

Project: White Oak LF 10/26/10
Pace Project No.: 9280732

SAMPLE DUPLICATE: 518991

Parameter	Units	9280793001 Result	Dup Result	RPD	Qualifiers
Nitrogen, Nitrate	mg/L	8.1	8.5	5	
Nitrogen, Nitrite	mg/L	0.40	0.40	1	
Nitrogen, NO2 plus NO3	mg/L	8.5	8.5	0	

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Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: White Oak LF 10/26/10
Pace Project No.: 9280732

QC Batch: WETA/8515
QC Batch Method: EPA 365.1
Analysis Method: EPA 365.1
Analysis Description: 365.1 Phosphorus, Total
Associated Lab Samples: 9280732007

METHOD BLANK: 523378
Matrix: Water
Associated Lab Samples: 9280732007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Phosphorus	mg/L	ND	0.10	11/07/10 14:36	

LABORATORY CONTROL SAMPLE: 523379

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phosphorus	mg/L	2.5	2.5	99	90-110	

MATRIX SPIKE SAMPLE: 523380

Parameter	Units	9280324001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Phosphorus	mg/L	1.3	2.5	3.6	92	90-110	

MATRIX SPIKE SAMPLE: 523382

Parameter	Units	9281145001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Phosphorus	mg/L	4.7	2.5	7.1	98	90-110	

SAMPLE DUPLICATE: 523381

Parameter	Units	9280588002 Result	Dup Result	RPD	Qualifiers
Phosphorus	mg/L	1.5	1.5	4	

SAMPLE DUPLICATE: 523383

Parameter	Units	9281152001 Result	Dup Result	RPD	Qualifiers
Phosphorus	mg/L	63.2	62.4	1	

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9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: White Oak LF 10/26/10
Pace Project No.: 9280732

QC Batch: WETA/8548
QC Batch Method: SM 5220D
Analysis Method: SM 5220D
Analysis Description: 5220D COD
Associated Lab Samples: 9280732007

METHOD BLANK: 525156
Matrix: Water
Associated Lab Samples: 9280732007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	ND	25.0	11/09/10 16:15	

LABORATORY CONTROL SAMPLE: 525157

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	750	732	98	90-110	

MATRIX SPIKE SAMPLE: 525158

Parameter	Units	9280683001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	41.0	750	799	101	75-125	

MATRIX SPIKE SAMPLE: 525160

Parameter	Units	9280683002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	ND	750	764	101	75-125	

SAMPLE DUPLICATE: 525159

Parameter	Units	9280683001 Result	Dup Result	RPD	Qualifiers
Chemical Oxygen Demand	mg/L	41.0	46.0	11	

SAMPLE DUPLICATE: 525161

Parameter	Units	9280683002 Result	Dup Result	RPD	Qualifiers
Chemical Oxygen Demand	mg/L	ND	ND		

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(704)875-9092

QUALIFIERS

Project: White Oak LF 10/26/10
Pace Project No.: 9280732

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is NELAP accredited. Contact your Pace PM for the current list of accredited analytes.

ANALYTE QUALIFIERS

B2	Oxygen usage is less than 2.0 for all dilutions set. The reported value is an estimated less than value and is calculated for the dilution using the most amount of sample.
C9	Common Laboratory Contaminant.
D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of 3

1319159

Section A Required Client Information:

Company: Haywood Co Solid Wst
Address:
Email To:
Phone: Fax:
Requested Due Date/TAT:

Section B Required Project Information:

Report To: Stephen King
Copy To:
Purchase Order No.:
Project Name: SW's Leachate
Project Number:

Section C Invoice Information:

Attention:
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager:
Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☑ RCRA ☐ OTHER

Site Location STATE: NC

Section D Required Client Information

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Matrix Codes (MATRIX / CODE): Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Tissue TS; Other OT

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED Composite Start DATE	COLLECTED Composite Start TIME	COLLECTED Composite End/GRAB DATE	COLLECTED Composite End/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N): pH Specific Cond	BOD	Sat	NO_2 NO_3 N	TP COD	Metals VOC	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	SW-1					10-26-10	1430		4			1	3					X				X			9280732-001
2	SW-2					10-26	1445		4			1	3					X				X			-002
3	SW-3					10-26	1500		4			1	3					X				X			-003
4	SW-5					10-26	1600		4			1	3					X				X			-004
5	SW-6					10-26	1200		4			1	3					X				X			-005
6	SW 7					10-26	1145		4			1	3					X				X			-006
7																									
8	Leachate					10-26	1645		9	3	2	1	3					X	X	X	X	X	X		-007
9																									
10																									
11																									
12																									

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
		10-26-10	1	Mark P. Swanns Pass	10-26-10					
	Mark P. Swanns Pass	10-27-10	845	[signature]	10/27/10	0845	2.8	Y	N	Y

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Mark P. Swanns

SIGNATURE of SAMPLER: Mark P. Swanns Pass

DATE Signed (MM/DD/YY): 10-26-10

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

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CHAIN-OF-CUSTODY / Analytical Request Document

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Page: 2 of 3

1428082

Section A Required Client Information:

Company: HAYWOOD
Address: CLYDE
Email To:
Phone: 627-8042 Fax:
Requested Due Date/TAT:

Section B Required Project Information:

Report To: Stephen King
Copy To:
Purchase Order No.:
Project Name: HAYWOOD White OAK
Project Number:

Section C Invoice Information:

Attention:
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager:
Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER _____

Site Location STATE: NC

Section D Required Client Information

Matrix Codes (MATRIX / CODE): Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Tissue TS; Other OT

ITEM #	SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N)	pH Temp Spcond	Static H2O	Appr IVOC	Appr Inorg	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 9280732
1	MW-1A					10-27-10	1200		4			1	3						X	X	X	X		-008
2	MW-2					10-27	1210		4			1	3						X	X	X	X		-009
3	MW-2D					10-27	1215		4			1	3						X	X	X	X		-010
4	MW-3R					10-27	1225		4			1	3						X	X	X	X		-011
5	MW 3DR					10-27	1235		4			1	3						X	X	X	X		-012
6	MW-4A					10-27	1310		4			1	3						X	X	X	X		-013
7	MW-8					10-27	1325		4			1	3						X	X	X	X		-014
8	MW-11S					10-27	1345		4			1	3						X	X	X	X		-015
9	MW-11D					10-27	1400		4			1	3						X	X	X	X		-016
10	MW-14					10-27	1440		4			1	3						X	X	X	X		-017
11	MW 15					10-27	1410		4			1	3						X	X	X	X		-018
12																								

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
~~10 HR~~		10-27-10	1455	Mark P Swan Pace	10-27-10	1455				
- 14.75 Hrs	Mark P Swan Pace	10-27-10	1600	[illegible]	10/27/10	1600	2-8	Y	N	Y
165 Miles										
$-150 Barcas										
100 Rope Tubing										

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: MARK P SWAN

SIGNATURE of SAMPLER: Mark P Swan Pace DATE Signed (MM/DD/YY): 10-27-10

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

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CHAIN-OF-CUSTODY / Analytical Request Document

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Page: 3 of 3

1428084

Section A Required Client Information:

Company: Haywood Solid Waste
Address: Clyde NC
Email To:
Phone: 627-8042 Fax:
Requested Due Date/TAT:

Section B Required Project Information:

Report To: Stephen King
Copy To:
Purchase Order No.:
Project Name: Haywood White Oak
Project Number:

Section C Invoice Information:

Attention:
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager:
Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☑ RCRA ☐ OTHER

Site Location STATE: NC

Section D Required Client Information

Matrix Codes MATRIX / CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Tissue TS; Other OT

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED Composite Start DATE	COLLECTED Composite Start TIME	COLLECTED Composite End/Grab DATE	COLLECTED Composite End/Grab TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N)	pH Temp Sample	Static H2O	Agen Ions	Agen Metals	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW-16					10-27-10	1250		4			1	3						V	X	X	X		019
2	MW-17					10-27-10	1300		4			1	3						X	X	X	X		020
3																								
4	TVL BIK Ash 102610					10-26			2				2								X			021
5	EQUIP BIK Ash 102610					10-26			3			1	2								X	X		022
6																								
7																								
8																								
9																								
10																								
11																								
12																								

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
		10-27-10	1455	Mark L Swan Basi	10-27-10	1455				
	Mark L Swan Basi	10-27-10	1600	Jon Rel	10/27/10	1600	2.8	Y	N	Y

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: MARK L. SWANN

SIGNATURE of SAMPLER: Mark L Swan Basi

DATE Signed (MM/DD/YY): 10-27-10

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

APPENDIX D

STATISTICAL CALCULATIONS

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J10-1957-20

COMPOUND	TOTAL	ND	DETECTED	%ND	STATISTICAL TEST
Total Antimony	209	203	6	97.1%	Poisson Prediction Limits
Total Arsenic	209	182	27	87.1%	Kruskal-Wallis
Total Barium	212	16	196	7.5%	ANOVA
Total Beryllium	210	169	41	80.5%	Kruskal-Wallis
Total Cadmium	210	172	38	81.9%	Kruskal-Wallis
Total Chromium	210	93	117	44.3%	Kruskal-Wallis
Total Cobalt	210	124	86	59.0%	Kruskal-Wallis
Total Copper	210	115	95	54.8%	Kruskal-Wallis
Total Lead	211	140	71	66.4%	Kruskal-Wallis
Total Nickel	211	92	119	43.6%	Kruskal-Wallis
Total Selenium	210	206	4	98.1%	Poisson Prediction Limits
Total Silver	210	207	3	98.6%	Poisson Prediction Limits
Total Thallium	210	192	18	91.4%	Poisson Prediction Limits
Total Vanadium	210	97	113	46.2%	Kruskal-Wallis
Total Zinc	210	55	155	26.2%	Kruskal-Wallis
Acetone	159	158	1	99.4%	Poisson Prediction Limits
Carbon Disulfide	159	156	3	98.1%	Poisson Prediction Limits
2-Butanone	159	158	1	99.4%	Poisson Prediction Limits

Sampling Event	# Detected
N 1	64
N 2	13
N 3	14
N 4	3
N 5	64
N 6	0
N 7	0
N 8	0
N 9	0
N 10	53
N 11	88
N 12	59
N 13	55
N 14	74
N 15	49
N 16	61
N 17	60
N 18	28
N 19	38
N 20	43
N 21	57
N 22	52
N 23	58
N 24	55
N 25	37
N 26	27
N 27	42

LEGEND FOR THE FOLLOWING PAGES:

ND = *Not Detected* at the method detection limit
MCL = *Maximum Contaminant Level* ; NCAC 2L Standard
NE = *Not Established* ; NC has not established a MCL
NP = *Not Present* during sampling event
NS = *Not Sampled*
NT = *Not Tested*
NA = information *Not Available*
MDL = *Method Detection Limit*

Total Detected Concentrations (per compound) =	1094
Total Detected Concentrations (per event) =	1094
Are all accounted for ?	Yes
Statistical Package Prepared By:	IAI
Statistical Package Checked By:	MSP

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J10-1957-20

Compound: **Total Antimony**
MCL (mg/l): Not Established
Method: Poisson Prediction Limits
Background: MW-11S, MW-11D, & MW-14

	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MDL
04/24/00	ND	NS	NS	ND	ND	ND	ND	ND	ND	ND	NS	**10**
06/26/00	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	**10**
07/26/00	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	**10**
09/18/00	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	**30**
04/09/01	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	NS	**10**
09/18/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**10**
10/29/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**10**
01/30/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**10**
02/28/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**30**
04/15/02	**15**	ND	NS	ND	ND	ND	NT	ND	ND	**11**	NS	**10**
09/26/02	ND	ND	ND	**12**	ND	ND	ND	ND	ND	ND	**98**	**10**
04/28/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10**
10/30/03	ND	ND	NT	ND	ND	ND	ND	ND	ND	ND	ND	**5**
04/20/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
10/21/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
04/18/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**12**	**5**
10/13/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
04/25/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**30**
10/20/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
04/25/07	ND	ND	ND	ND	ND	**20**	ND	ND	ND	ND	ND	**6**
10/31/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
04/23/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
10/20/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
04/22/09	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	**5**
10/26/09	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	**5**
04/22/10	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	**5**
10/27/10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**

1) If not detected (ND), use half of the detection limit.

04/24/00	5	-	-	5	5	5	5	5	5	5	-
06/26/00	5	5	-	-	-	-	-	-	-	-	-
07/26/00	5	5	-	-	-	-	-	-	-	-	-
09/18/00	-	-	-	-	-	-	-	-	-	-	-
04/09/01	5	5	-	5	5	5	5	5	5	5	-
09/18/01	-	-	-	-	-	-	-	-	-	-	-
10/29/01	-	-	-	-	-	-	-	-	-	-	-
01/30/02	-	-	-	-	-	-	-	-	-	-	-
02/28/02	-	-	-	-	-	-	-	-	-	-	-
04/15/02	15	5	-	5	5	5	-	5	5	11	-
09/26/02	5	5	5	12	5	5	5	5	5	5	98
04/28/03	5	5	5	5	5	5	5	5	5	5	5
10/30/03	2.5	2.5	-	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
04/20/04	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
10/21/04	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
04/18/05	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	12
10/13/05	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
04/25/06	15	15	15	15	15	15	15	15	15	15	15
10/20/06	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
04/25/07	3	3	3	3	3	20	3	3	3	3	3
10/31/07	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
04/23/08	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
10/20/08	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
04/22/09	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	-
10/26/09	2.5	2.5	2.5	2.5	2.5	2.5	-	-	-	2.5	2.5
04/22/10	2.5	2.5	2.5	2.5	2.5	2.5	-	-	2.5	2.5	2.5
10/27/10				2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5

2) Set the total number of data values for background wells (through the previous sampling event) equal to 'n' = 21.
Use 1/2 of the method detection limit to calculate the Total Poisson Count of the Sum (T_n).

$n = 56$
$T_{n1} = 226.5$

3) Using Gibbons' formula, calculate the upper Poisson Prediction limit T^*_k:

$$T^*_k = cT_{n1} + ct^2/2 + ct[T_{n1}(1+1/c) + t^2/4]^{-0.5}$$

where $c = k/n$
and where k = the number of future predicted measurements (one per well during the current sampling event)
and where t = the upper 99th percentile of the t-distribution with (n-1) degrees of freedom (Table 6 of the IFG).

$k = 8$
$n = 56$
$T_{n1} = 226.5$
$t\,[55,.01] = 2.3983$
$c = 0.1429$
$T_{n2} = 20$
$T^*_k = 47.4$

4) Compare the *Poisson Prediction Limit* (T^*_k) to the *Sum of the Concentrations Detected* (T_{n2}) in the wells during the most recent sampling event.
Since the Poisson Prediction Limit was not exceeded, there is no evidence of contamination.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J10-1957-20

Compound: **Total Arsenic**
NC MCL (mg/l): 50
Method: Kruskal-Wallis
Background: MW-11S, MW-11D, & MW-14

	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MDL
04/24/00	ND	NS	NS	ND	ND	ND	ND	ND	ND	ND	NS	**10**
06/26/00	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	**10**
07/26/00	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	**10**
09/18/00	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	**10**
04/09/01	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	NS	**10**
09/18/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**10**
10/29/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**10**
01/30/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**10**
02/28/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**10**
04/15/02	ND	ND	NS	ND	ND	ND	NT	ND	ND	ND	NS	**10**
09/26/02	ND	**5.7**	ND	ND	ND	ND	ND	ND	**27**	ND	**68**	**5**
04/28/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**24**	**5**
10/30/03	ND	ND	NT	ND	ND	ND	ND	ND	ND	**5.3**	**81**	**5**
04/20/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	**7.4**	**30**	**5**
10/21/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**59**	**5**
04/18/05	ND	ND	ND	**10**	ND	ND	ND	ND	ND	**5.2**	**65**	**5**
10/13/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**44**	**5**
04/25/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**42**	**10**
10/20/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**13**	**5**
04/25/07	ND	ND	ND	ND	ND	**280**	ND	ND	ND	ND	**12**	**5**
10/31/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**21.4**	**5**
04/23/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10.2**	**5**
10/20/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**6.6**	**5**
04/22/09	ND	ND	**5.4**	ND	ND	**5.6**	ND	ND	ND	ND	NS	**5**
10/26/09	ND	ND	ND	ND	**6**	ND	NS	NS	NS	ND	ND	**5**
04/22/10	ND	ND	ND	ND	**7.4**	**9.8**	NS	NS	ND	ND	ND	**5**
10/27/10	ND	ND	ND	ND	**5.4**	**5.9**	ND	ND	ND	ND	ND	**5**
N_i	22	21	16	20	20	20	17	18	19	20	16	
sum of rank values (R_i)	2013.0	2018.0	1558.0	1933.5	2123.5	2243.0	1555.5	1647.0	1848.0	2115.0	2890.5	
avg rank value (Rbar)	91.5	96.1	97.4	96.7	106.2	112.2	91.5	91.5	97.3	105.8	180.7	

	Number of each rank value											Rank Value
rank value of NDs =	22	20	15	19	17	16	17	18	18	17	3	91.5
rank value of 5.2s =	0	0	0	0	0	0	0	0	0	1	0	183
rank value of 5.3s =	0	0	0	0	0	0	0	0	0	1	0	184
rank value of 5.4s =	0	0	1	0	1	0	0	0	0	0	0	185.5
rank value of 5.6s =	0	0	0	0	0	1	0	0	0	0	0	187
rank value of 5.7s =	0	1	0	0	0	0	0	0	0	0	0	188
rank value of 5.9s =	0	0	0	0	0	1	0	0	0	0	0	189
rank value of 6s =	0	0	0	0	1	0	0	0	0	0	0	190
rank value of 6.6s =	0	0	0	0	0	0	0	0	0	0	1	191
rank value of 7.4s =	0	0	0	0	1	0	0	0	0	1	0	192.5
rank value of 9.8s =	0	0	0	0	0	1	0	0	0	0	0	194
rank value of 10s =	0	0	0	1	0	0	0	0	0	0	0	195
rank value of 10.2s =	0	0	0	0	0	0	0	0	0	0	1	196
rank value of 12s =	0	0	0	0	0	0	0	0	0	0	1	197
rank value of 13s =	0	0	0	0	0	0	0	0	0	0	1	198
rank value of 21.4s =	0	0	0	0	0	0	0	0	0	0	1	199

rank value of 24s =	0	0	0	0	0	0	0	0	0	0	1	200
rank value of 27s =	0	0	0	0	0	0	0	0	1	0	0	201
rank value of 30s =	0	0	0	0	0	0	0	0	0	0	1	202
rank value of 42s =	0	0	0	0	0	0	0	0	0	0	1	203
rank value of 44s =	0	0	0	0	0	0	0	0	0	0	1	204
rank value of 59s =	0	0	0	0	0	0	0	0	0	0	1	205
rank value of 65s =	0	0	0	0	0	0	0	0	0	0	1	206
rank value of 68s =	0	0	0	0	0	0	0	0	0	0	1	207
rank value of 81s =	0	0	0	0	0	0	0	0	0	0	1	208
rank value of 280s =	0	0	0	0	0	1	0	0	0	0	0	209
n =	**22**	**21**	**16**	**20**	**20**	**20**	**17**	**18**	**19**	**20**	**16**	

Sum of rank value calculations

2013	1830	1372.5	1738.5	1555.5	1464	1555.5	1647	1647	1555.5	274.5
0	0	0	0	0	0	0	0	0	183	0
0	0	0	0	0	0	0	0	0	184	0
0	0	185.5	0	185.5	0	0	0	0	0	0
0	0	0	0	0	187	0	0	0	0	0
0	188	0	0	0	0	0	0	0	0	0
0	0	0	0	0	189	0	0	0	0	0
0	0	0	0	190	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	191
0	0	0	0	192.5	0	0	0	0	192.5	0
0	0	0	0	0	194	0	0	0	0	0
0	0	0	195	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	196
0	0	0	0	0	0	0	0	0	0	197
0	0	0	0	0	0	0	0	0	0	198
0	0	0	0	0	0	0	0	0	0	199
0	0	0	0	0	0	0	0	0	0	200
0	0	0	0	0	0	0	0	201	0	0
0	0	0	0	0	0	0	0	0	0	202
0	0	0	0	0	0	0	0	0	0	203
0	0	0	0	0	0	0	0	0	0	204
0	0	0	0	0	0	0	0	0	0	205
0	0	0	0	0	0	0	0	0	0	206
0	0	0	0	0	0	0	0	0	0	207
0	0	0	0	0	0	0	0	0	0	208
0	0	0	0	0	209	0	0	0	0	0

sum of rank values (R_i)	**2013**	**2018**	**1558**	**1933.5**	**2123.5**	**2243**	**1555.5**	**1647**	**1848**	**2115**	**2890.5**

Compute the Kruskal-Wallis statistic:

$$H = \{[12/N(N+1)] * [S^{K}_{i=1} (R_i^2)/N_i]\} -3(N+1)$$

Well =	**Background**	**MW-1A**	**MW-2**	**MW-2D**	**MW-3**	**MW-3D**	**MW-4A**	**MW-8**	**MW-15**
Ri^2/N_i =	529439.3	186921	225463	251552	142328	150701	179742	223661	522187

$N_{i\ bg}$ = 59
N = 209
H = 29.47

Adjust H for ties:

T_i = 6E+06 sum of T1..T3

$H' = H/(1-(T_i/(N^3-N)))$
H' = 86.75
Chi-square = 15.51

Compare the calculated value H' to the tabulated Chi-square value with K-1 = # groups -1 = 17df at the 5% significance level from Table 1 of the IFG. The value is 15.51 which is less than H' =86.75.
Therefore, there is evidence of significant differences between the well groups.
Post-hoc pairwise comparisons are necessary (see below).

Calculate the critical values to compare each compliance well to the background wells:

Critical Value (C_x) = $P(N(N+1)/12)^{0.5} * (1/N_{i\ bg}+1/N_x)^{0.5}$
P = 2.33 Percentile of Standard Normal Distribution
from Table 4 of IFG
N = total sample size
$N_{i\ bg}$ = total samples (N_i) of background data
N_x = total samples (N_i) of well x

Difference between average ranks (Dx) = Rbar (well x) - avg Rbar (background)

Well =	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	**MW-15**
Rbar (well x) =	96.7	106.2	112.2	91.5	91.5	97.3	105.8	180.7
avg Rbar (background) =	94.7	94.7	94.7	94.7	94.7	94.7	94.7	94.7
Dx =	1.9	11.4	17.4	-3.2	-3.2	2.5	11.0	85.9
Cx =	36.5	36.5	36.5	38.8	37.9	37.2	36.5	39.7
Statistical Significance ?	No	No	No	No	No	No	No	**Yes**
If SSI, is current event above MCL?	-	-	-	-	-	-	-	No

Compare each difference (Dx) with the corresponding critical value (Cx).
The Dx value for the above indicated wells do exceed the corresponding Cx value.
Therefore, we conclude that the concentration of Total Arsenic averaged over these compliance wells are significantly greater than that of the background wells.
Shewart-CUSUM Control Charts should be performed for each failing well to check for statistical significance.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J10-1957-20

Compound: **Total Arsenic**
NC MCL (mg/l): 50
Method: Shewhart-CUSUM Control Chart

Part 1: Check for Normality

	MW-15	MDL
9/26/2002	**68**	**5**
4/28/2003	**24**	**5**
10/30/2003	**81**	**5**
4/20/2004	**30**	**5**
10/21/2004	**59**	**5**
4/18/2005	**65**	**5**
10/13/2005	**44**	**5**
4/25/2006	**42**	**10**
10/20/2006	**13**	**5**
4/25/2007	**12**	**5**
10/31/2007	**21.4**	**5**
4/23/2008	**10.2**	**5**
10/20/2008	**6.6**	**5**
4/22/2009	NS	**5**
10/26/2009	ND	**5**
4/22/2010	ND	**5**
10/27/2010	ND	**5**

If not detected (ND), use half of the detection limit.

68	X_i values =	53876.309
24		-241.9499
81		130854.73
30		-0.012366
59		23810.196
65		42030.759
44		2610.2586
42		1630.0128
13		-5116.233
12		-6059.675
21.4		-688.7578
10.2		-8037.559
6.6		-13196.54
2.5		-21325.95
2.5		-21325.95
2.5		-21325.95

X_{bar} = 30.23125
SD = 26.307736
N = 16
$1/NS_i(X_i-X_{bar})^3$ = 9843.3557
g_1 = 0.5955742

Since the Coefficient of Skewness of 0.60 is less than 1.0, the data appear not to be significantly skewed.
Proceed with further statistical tests using the real detected values shown above.

ln =	4.2195077	X_i values = 2.4174187
	3.1780538	0.0271741
	4.3944492	3.4913221
	3.4011974	0.1437023
	4.0775374	1.7285483
	4.1743873	2.1817077
	3.7841896	0.7455976
	3.7376696	0.636631
	2.5649494	-0.030506
	2.4849066	-0.060469
	3.0633909	0.0064328
	2.3223877	-0.170975
	1.8870696	-0.971302
	0.9162907	-7.542449
	0.9162907	-7.542449
	0.9162907	-7.542449

X_{bar} = 2.8774105
SD = 1.2183375
N = 16
$1/NS_i(X_i-X_{bar})^3$ = -0.780129
g_1 = 0.475233

Use the real values (not log-transformed) indicated in the previous section.

Part 2: Shewhart-CUSUM Control Chart

Date	MW-15	MDL	Data for Testing
9/26/2002	**68**	5	68
4/28/2003	**24**	5	24
10/30/2003	**81**	5	81
4/20/2004	**30**	5	30
10/21/2004	**59**	5	59
4/18/2005	**65**	5	65
10/13/2005	**44**	5	44
4/25/2006	**42**	10	42
10/20/2006	**13**	5	13
4/25/2007	**12**	5	12
10/31/2007	**21.4**	5	21.4
4/23/2008	**10.2**	5	10.2
10/20/2008	**6.6**	5	6.6
4/22/2009	NS	5	-
10/26/2009	ND	5	2.5
4/22/2010	ND	5	2.5
10/27/2010	ND	5	2.5

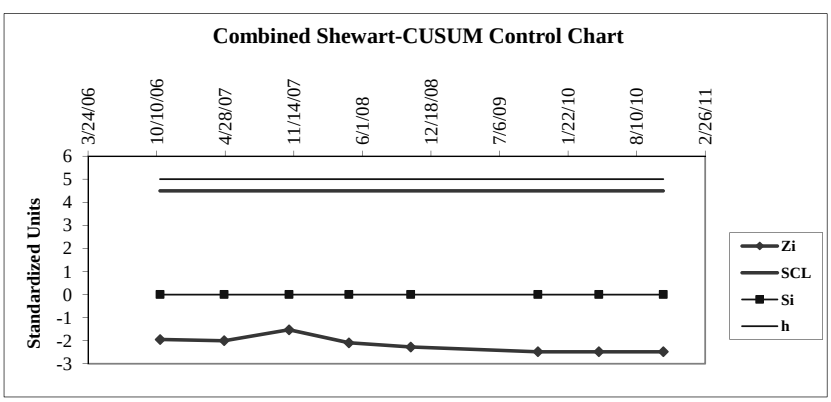
Compute the mean and standard deviation of the historical data:

51.625 = x_{mean} (Mean of N1-N8 historical data)
19.805753 = s (Standard Deviation of N1-N8 historical data)
1 = k (constant, reference value)
5 = h (constant, upper control limit for the CUSUM scheme)
4.5 = SCL (Constant, upper Shewhart Control Limit)

Compute the standardized mean (Z_i) and the cumulative sum (S_i) for each concentration.

Date	x_i	Z_i	S_i	h	SCL
			0		
10/20/2006	13	-1.9501909	0	5	4.5
4/25/2007	12	-2.0006813	0	5	4.5
10/31/2007	21.4	-1.5260717	0	5	4.5
4/23/2008	10.2	-2.091564	0	5	4.5
10/20/2008	6.6	-2.2733294	0	5	4.5
10/26/2009	2.5	-2.4803399	0	5	4.5
4/22/2010	2.5	-2.4803399	0	5	4.5
10/27/2010	2.5	-2.4803399	0	5	4.5

Plot Z_i and S_i versus time:



Compare the Z_i and S_i values to their respective control limits of SCL and h.
The limits were not exceeded and do not indicate statistically significant evidence of contamination at the site.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J10-1957-20

Compound: **Total Barium**
NC MCL (mg/l): 2000
Method: ANOVA
Background: MW-11S, MW-11D, & MW-14

	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MDL
04/24/00	**250**	NS	NS	**240**	**420**	**200**	**63**	**300**	**93**	**230**	NS	**5**
06/26/00	**300**	**67**	NS	NS	NS	NS	NS	NS	NS	NS	NS	**5**
07/26/00	**330**	**30**	NS	NS	NS	NS	NS	NS	NS	NS	NS	**5**
09/18/00	NS	NS	NS	**330**	**92**	NS	NS	NS	NT	NS	NS	**500**
04/09/01	**1300**	**380**	NS	**180**	**330**	**120**	**80**	**290**	**360**	**970**	NS	**5**
09/18/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**5**
10/29/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**5**
01/30/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**5**
02/28/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**500**
04/15/02	**1300**	**41**	NS	ND	ND	**160**	**23**	**190**	**460**	**1400**	NS	**5**
09/26/02	**330**	**500**	**750**	**4200**	**120**	**230**	**93**	**410**	**910**	**1400**	**11000**	**5**
04/28/03	**600**	**66**	**220**	**1800**	**160**	**140**	**110**	**92**	**360**	**800**	**2800**	**5**
10/30/03	**320**	**100**	NT	**210**	**310**	**130**	**95**	**110**	**1200**	**270**	**4900**	**5**
04/20/04	**320**	**56**	**120**	**410**	**460**	**170**	**140**	**210**	**62**	**940**	**2000**	**5**
10/21/04	**320**	**40**	**200**	**300**	**310**	**140**	**140**	**130**	**12**	**900**	**4900**	**5**
04/18/05	**480**	**55**	**160**	**7200**	**610**	**180**	**160**	**140**	**12**	**1000**	**3700**	**5**
10/13/05	**770**	**37**	**160**	**1700**	**870**	**250**	**160**	**140**	**27**	**810**	**2700**	**5**
04/25/06	**650**	ND	ND	ND	**1100**	ND	ND	ND	ND	**750**	**2700**	**500**
10/20/06	**410**	**22**	**180**	**470**	**1100**	ND	ND	ND	**160**	ND	**650**	**5**
04/25/07	**290**	ND	**200**	**240**	**1300**	**1500**	**130**	**180**	ND	ND	**600**	**100**
10/31/07	**501**	**31.5**	**223**	**198**	**1350**	**591**	**184**	**208**	**62.4**	**516**	**872**	**5**
04/23/08	**194**	**30.8**	**253**	**168**	**1230**	**661**	**216**	**202**	**61.8**	**151**	**361**	**5**
10/20/08	**474**	**66**	**313**	**224**	**1210**	**894**	**164**	**216**	**41.1**	**182**	**245**	**5**
04/22/09	**126**	**47.2**	**591**	**309**	**1300**	**817**	**230**	**216**	**77**	**163**	NS	**5**
10/26/09	**131**	**16.8**	**144**	**188**	**1720**	**987**	NS	NS	NS	**209**	**178**	**5**
04/22/10	**208**	**43.5**	**153**	**157**	**1920**	**1380**	NS	NS	**20.9**	**150**	**75**	**5**
10/27/10	**147**	**15.8**	**162**	**178**	**1760**	**1550**	**531**	**234**	**20**	**190**	**111**	**5**

If not detected (ND), use the natural log of half of the detection limit.

ln =	5.52146			5.48064	6.04025	5.29832	4.14313	5.70378	4.5326	5.43808	
	5.70378	4.20469									
	5.79909	3.4012									
				5.79909	4.52179						
	7.17012	5.94017		5.19296	5.79909	4.78749	4.38203	5.66988	5.8861	6.8773	
	7.17012	3.71357		0.91629	0.91629	5.07517	3.13549	5.24702	6.13123	7.24423	
	5.79909	6.21461	6.62007	8.34284	4.78749	5.43808	4.5326	6.01616	6.81344	7.24423	9.30565
	6.39693	4.18965	5.39363	7.49554	5.07517	4.94164	4.70048	4.52179	5.8861	6.68461	7.93737
	5.76832	4.60517		5.34711	5.73657	4.86753	4.55388	4.70048	7.09008	5.59842	8.49699
	5.76832	4.02535	4.78749	6.01616	6.13123	5.1358	4.94164	5.34711	4.12713	6.84588	7.6009
	5.76832	3.68888	5.29832	5.70378	5.73657	4.94164	4.94164	4.86753	2.48491	6.80239	8.49699
	6.17379	4.00733	5.07517	8.88184	6.41346	5.19296	5.07517	4.94164	2.48491	6.90776	8.21609
	6.64639	3.61092	5.07517	7.43838	6.76849	5.52146	5.07517	4.94164	3.29584	6.69703	7.90101
	6.47697	5.52146	5.52146	5.52146	7.00307	5.52146	5.52146	5.52146	5.52146	6.62007	7.90101
	6.01616	3.09104	5.19296	6.15273	7.00307	0.91629	0.91629	0.91629	5.07517	0.91629	6.47697
	5.66988	3.91202	5.29832	5.48064	7.17012	7.31322	4.86753	5.19296	3.91202	3.91202	6.39693
	6.21661	3.44999	5.40717	5.28827	7.20786	6.38182	5.21494	5.33754	4.13357	6.24611	6.77079
	5.26786	3.42751	5.53339	5.12396	7.11477	6.49375	5.37528	5.30827	4.1239	5.01728	5.88888
	6.16121	4.18965	5.7462	5.41165	7.09838	6.79571	5.09987	5.37528	3.71601	5.20401	5.50126
	4.83628	3.85439	6.38182	5.73334	7.17012	6.70564	5.43808	5.37528	4.34381	5.09375	
	4.8752	2.82138	4.96981	5.23644	7.45008	6.89467				5.34233	5.18178
	5.33754	3.77276	5.03044	5.05625	7.56008	7.22984			3.03975	5.01064	4.31482
	4.99043	2.76001	5.0876	5.18178	7.47307	7.34601	6.27476	5.45532	2.99573	5.24702	4.70953
n_i =	22	21	16	21	21	20	18	18	19	20	16

Xi. =	129.534	84.4018	86.419	120.801	130.177	112.799	84.1895	90.4394	85.5938	114.949	111.097	1150.4 = X..
Xi.bar =	5.8879	4.01913	5.40119	5.75244	6.19891	5.63993	4.67719	5.02441	4.50493	5.74747	6.94356	5.43 = X..bar
std dev =	0.64177	0.9113	0.49491	1.55706	1.51408	1.43515	1.14332	1.08936	1.40049	1.47351	1.50604	
$ni*(Xi.bar-X..bar)^2$ =	4.68533	41.5895	0.01018	2.23205	12.5315	0.91171	10.1041	2.90893	16.1335	2.06153	36.8276	
$(Xi.^2/n_i)$ =	762.683	339.222	466.765	694.901	806.955	636.175	393.77	454.405	385.594	660.669	771.409	

	SS	df	MS	F	Fc
SSw	129.996	10	12.9996	8	1.67
SS_error	315.379	201	1.56905		
SSt	445.375	211			

The calculated F statistic is 8.28. The tabulated Fc value with 10 and 201 degrees of freedom and the a=0.05 level is 1.67 (Table 2 of IFG). Since the calculated value of F exceeds the tabulated value of Fc, the hypothesis of equal means must be rejected, and post hoc comparisons are necessary (see below).

Bonferroni t-statistics

	MW-1A	**MW-2**	MW-2D	MW-3	MW-3D	MW-4A	MW-8	**MW-15**
$Xbar_i$ = avg per well =	5.75244	6.19891	5.63993	4.67719	5.02441	4.50493	5.74747	6.94356
$D_w = Xbar_i - Xbar_{up}$ =	0.66168	1.10815	0.54917	-0.4136	-0.0663	-0.5858	0.65672	1.8528
$= [MS\text{-}error*(1/n_{up} + 1/n_i)]^{0.5}$ =	0.3987	0.3987	0.40598	0.42249	0.42249	0.41389	0.40598	0.44226
$D_i = SE_i * t_c$ =	0.92897	0.92897	0.94594	0.98441	0.98441	0.96436	0.94594	1.03048
Statistical Significance ?	No	**Yes**	No	No	No	No	No	**Yes**
f SSI, is current event above MCL?	-	No	-	-	-	-	-	No

59 = n_{up}
5.090757 = $Xbar_{up}$(average background: MW-11S, MW-11D, & MW-14)
1.5690512 = MS_error
201 = degrees of freedom
8 = m (number of compliance wells)
2.33 = t_c (from Table 3 of IFG)

The F test was significant at the 5% level. The Bonferroni multiple comparisons procedure was then used to determine for which wells there was statistically significant evidence of contamination.
If the calculated D_w value exceeds the corresponding D_i value, it can be concluded that there is significant evidence of contamination.
Significant evidence of contamination is present in the 2 monitoring wells indicated above.
Perform a Shewart-CUSUM Control Chart evaluation to determine if intrawell statistical significance is present.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J10-1957-20

Compound: **Total Barium**
AL MCL (mg/l): 2000
Method: Levene's Test for Homogeneity
Background: MW-11S, MW-11D, & MW-14

	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MDL
4/24/2000	**250**	NS	NS	**240**	**420**	**200**	**63**	**300**	**93**	**230**	NS	**5**
6/26/2000	**300**	**67**	NS	NS	NS	NS	NS	NS	NS	NS	NS	**5**
7/26/2000	**330**	**30**	NS	NS	NS	NS	NS	NS	NS	NS	NS	**5**
9/18/2000	NS	NS	NS	**330**	**92**	NS	NS	NS	NT	NS	NS	**500**
4/9/2001	**1300**	**380**	NS	**180**	**330**	**120**	**80**	**290**	**360**	**970**	NS	**5**
9/18/2001	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**5**
10/29/2001	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**5**
1/30/2002	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**5**
2/28/2002	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**500**
4/15/2002	**1300**	**41**	NS	ND	ND	**160**	**23**	**190**	**460**	**1400**	NS	**5**
9/26/2002	**330**	**500**	**750**	**4200**	**120**	**230**	**93**	**410**	**910**	**1400**	**11000**	**5**
4/28/2003	**600**	**66**	**220**	**1800**	**160**	**140**	**110**	**92**	**360**	**800**	**2800**	**5**
10/30/2003	**320**	**100**	NT	**210**	**310**	**130**	**95**	**110**	**1200**	**270**	**4900**	**5**
4/20/2004	**320**	**56**	**120**	**410**	**460**	**170**	**140**	**210**	**62**	**940**	**2000**	**5**
10/21/2004	**320**	**40**	**200**	**300**	**310**	**140**	**140**	**130**	**12**	**900**	**4900**	**5**
4/18/2005	**480**	**55**	**160**	**7200**	**610**	**180**	**160**	**140**	**12**	**1000**	**3700**	**5**
10/13/2005	**770**	**37**	**160**	**1700**	**870**	**250**	**160**	**140**	**27**	**810**	**2700**	**5**
4/25/2006	**650**	ND	ND	ND	**1100**	ND	ND	ND	ND	**750**	**2700**	**500**
10/20/2006	**410**	**22**	**180**	**470**	**1100**	ND	ND	ND	**160**	ND	**650**	**5**
4/25/2007	**290**	ND	**200**	**240**	**1300**	**1500**	**130**	**180**	ND	ND	**600**	**100**
10/31/2007	**501**	**31.5**	**223**	**198**	**1350**	**591**	**184**	**208**	**62.4**	**516**	**872**	**5**
4/23/2008	**194**	**30.8**	**253**	**168**	**1230**	**661**	**216**	**202**	**61.8**	**151**	**361**	**5**
10/20/2008	**474**	**66**	**313**	**224**	**1210**	**894**	**164**	**216**	**41.1**	**182**	**245**	**5**
4/22/2009	**126**	**47.2**	**591**	**309**	**1300**	**817**	**230**	**216**	**77**	**163**	NS	**5**
10/26/2009	**131**	**16.8**	**144**	**188**	**1720**	**987**	NS	NS	NS	**209**	**178**	**5**
4/22/2010	**208**	**43.5**	**153**	**157**	**1920**	**1380**	NS	NS	**20.9**	**150**	**74.8**	**5**
10/27/2010	**147**	**15.8**	**162**	**178**	**1760**	**1550**	**531**	**234**	**20**	**190**	**111**	**5**

If not detected (ND), use half of the detection limit.

250			240	420	200	63	300	93	230	
300	67									
330	30									
			330	92						
1300	380		180	330	120	80	290	360	970	
1300	41		2.5	2.5	160	23	190	460	1400	
330	500	750	4200	120	230	93	410	910	1400	11000
600	66	220	1800	160	140	110	92	360	800	2800
320	100		210	310	130	95	110	1200	270	4900
320	56	120	410	460	170	140	210	62	940	2000
320	40	200	300	310	140	140	130	12	900	4900
480	55	160	7200	610	180	160	140	12	1000	3700
770	37	160	1700	870	250	160	140	27	810	2700
650	250	250	250	1100	250	250	250	250	750	2700
410	22	180	470	1100	2.5	2.5	2.5	160	2.5	650
290	50	200	240	1300	1500	130	180	50	50	600
501	31.5	223	198	1350	591	184	208	62.4	516	872
194	30.8	253	168	1230	661	216	202	61.8	151	361
474	66	313	224	1210	894	164	216	41.1	182	245
126	47.2	591	309	1300	817	230	216	77	163	
131	16.8	144	188	1720	987				209	178
208	43.5	153	157	1920	1380			20.9	150	74.8

	147	15.8	162	178	1760	1550	531	234	20	190	111
n =	22	21	16	21	21	20	18	18	19	20	16
bar x_i =	443.23	92.648	254.94	902.6	841.64	517.63	153.97	195.58	223.12	554.18	2362
z_{ij} =	193.23			662.6	421.64	317.63	90.972	104.42	130.12	324.18	
	143.23	25.648									
	113.23	62.648									
				572.6	749.64						
	856.77	287.35		722.6	511.64	397.63	73.972	94.417	136.88	415.83	
	856.77	51.648		900.1	839.14	357.63	130.97	5.5833	236.88	845.83	
	113.23	407.35	495.06	3297.4	721.64	287.63	60.972	214.42	686.88	845.83	8638
	156.77	26.648	34.938	897.4	681.64	377.63	43.972	103.58	136.88	245.83	438.01
	123.23	7.3524		692.6	531.64	387.63	58.972	85.583	976.88	284.18	2538
	123.23	36.648	134.94	492.6	381.64	347.63	13.972	14.417	161.12	385.83	361.99
	123.23	52.648	54.938	602.6	531.64	377.63	13.972	65.583	211.12	345.83	2538
	36.773	37.648	94.938	6297.4	231.64	337.63	6.0278	55.583	211.12	445.83	1338
	326.77	55.648	94.938	797.4	28.357	267.63	6.0278	55.583	196.12	255.83	338.01
	206.77	157.35	4.9375	652.6	258.36	267.63	96.028	54.417	26.884	195.83	338.01
	33.227	70.648	74.938	432.6	258.36	515.13	151.47	193.08	63.116	551.68	1712
	153.23	42.648	54.938	662.6	458.36	982.38	23.972	15.583	173.12	504.18	1762
	57.773	61.148	31.938	704.6	508.36	73.375	30.028	12.417	160.72	38.175	1490
	249.23	61.848	1.9375	734.6	388.36	143.38	62.028	6.4167	161.32	403.18	2001
	30.773	26.648	58.063	678.6	368.36	376.38	10.028	20.417	182.02	372.18	2117
	317.23	45.448	336.06	593.6	458.36	299.38	76.028	20.417	146.12	391.18	
	312.23	75.848	110.94	714.6	878.36	469.38				345.18	2184
	235.23	49.148	101.94	745.6	1078.4	862.38			202.22	404.18	2287.2
	296.23	76.848	92.938	724.6	918.36	1032.4	377.03	38.417	203.12	364.18	2251
bar z_i =	229.93	81.849	111.15	1075.2	533.52	423.9	73.691	64.463	231.72	398.24	2020.8
n_i * bar z_i^2 =	1E+06	140683	197664	2E+07	6E+06	4E+06	97747	74799	1E+06	3E+06	7E+07

bar z = 476.77
N = 212

	SS	df	MS	F_{Ratio}	$F_{critical}$
Between Wells	6E+07	10	6E+06	6.98	1.67
Error	2E+08	201	814413		
Total	2E+08	211			

Since the F-ratio = 6.98 exceeds the tabulated value of F-critical = 1.67 (see Table 2 of IFG) with 10 and 201 df, the assumption of equal variances should be rejected.
Re-test the data set using the natural log of the above values.

	MW-11S	**MW-11D**	**MW-14**	**MW-1A**	**MW-2**	**MW-2D**	**MW-3**	**MW-3D**	**MW-4A**	**MW-8**	**MW-15**
ln=	5.5215			5.4806	6.0403	5.2983	4.1431	5.7038	4.5326	5.4381	
	5.7038	4.2047									
	5.7991	3.4012									
				5.7991	4.5218						
	7.1701	5.9402		5.193	5.7991	4.7875	4.382	5.6699	5.8861	6.8773	
	7.1701	3.7136		0.9163	0.9163	5.0752	3.1355	5.247	6.1312	7.2442	
	5.7991	6.2146	6.6201	8.3428	4.7875	5.4381	4.5326	6.0162	6.8134	7.2442	9.3057
	6.3969	4.1897	5.3936	7.4955	5.0752	4.9416	4.7005	4.5218	5.8861	6.6846	7.9374
	5.7683	4.6052		5.3471	5.7366	4.8675	4.5539	4.7005	7.0901	5.5984	8.497

	5.7683	4.0254	4.7875	6.0162	6.1312	5.1358	4.9416	5.3471	4.1271	6.8459	7.6009
	5.7683	3.6889	5.2983	5.7038	5.7366	4.9416	4.9416	4.8675	2.4849	6.8024	8.497
	6.1738	4.0073	5.0752	8.8818	6.4135	5.193	5.0752	4.9416	2.4849	6.9078	8.2161
	6.6464	3.6109	5.0752	7.4384	6.7685	5.5215	5.0752	4.9416	3.2958	6.697	7.901
	6.477	5.5215	5.5215	5.5215	7.0031	5.5215	5.5215	5.5215	5.5215	6.6201	7.901
	6.0162	3.091	5.193	6.1527	7.0031	0.9163	0.9163	0.9163	5.0752	0.9163	6.477
	5.6699	3.912	5.2983	5.4806	7.1701	7.3132	4.8675	5.193	3.912	3.912	6.3969
	6.2166	3.45	5.4072	5.2883	7.2079	6.3818	5.2149	5.3375	4.1336	6.2461	6.7708
	5.2679	3.4275	5.5334	5.124	7.1148	6.4938	5.3753	5.3083	4.1239	5.0173	5.8889
	6.1612	4.1897	5.7462	5.4116	7.0984	6.7957	5.0999	5.3753	3.716	5.204	5.5013
	4.8363	3.8544	6.3818	5.7333	7.1701	6.7056	5.4381	5.3753	4.3438	5.0938	
	4.8752	2.8214	4.9698	5.2364	7.4501	6.8947				5.3423	5.1818
	5.3375	3.7728	5.0304	5.0562	7.5601	7.2298			3.0397	5.0106	4.3148
	4.9904	2.76	5.0876	5.1818	7.4731	7.346	6.2748	5.4553	2.9957	5.247	4.7095
n =	22	21	16	21	21	20	18	18	19	20	16
bar x_i =	5.8879	4.0191	5.4012	5.7524	6.1989	5.6399	4.6772	5.0244	4.5049	5.7475	6.9436
z_{ij} =	0.3664			0.2718	0.1587	0.3416	0.5341	0.6794	0.0277	0.3094	
	0.1841	0.1856									
	0.0888	0.6179									
				0.0467	1.6771						
	1.2822	1.921		0.5595	0.3998	0.8524	0.2952	0.6455	1.3812	1.1298	
	1.2822	0.3056		4.8361	5.2826	0.5648	1.5417	0.2226	1.6263	1.4968	
	0.0888	2.1955	1.2189	2.5904	1.4114	0.2018	0.1446	0.9917	2.3085	1.4968	2.3621
	0.509	0.1705	0.0076	1.7431	1.1237	0.6983	0.0233	0.5026	1.3812	0.9371	0.9938
	0.1196	0.586		0.4053	0.4623	0.7724	0.1233	0.3239	2.5851	0.1491	1.5534
	0.1196	0.0062	0.6137	0.2637	0.0677	0.5041	0.2645	0.3227	0.3778	1.0984	0.6573
	0.1196	0.3303	0.1029	0.0487	0.4623	0.6983	0.2645	0.1569	2.02	1.0549	1.5534
	0.2859	0.0118	0.326	3.1294	0.2146	0.447	0.398	0.0828	2.02	1.1603	1.2725
	0.7585	0.4082	0.326	1.6859	0.5696	0.1185	0.398	0.0828	1.2091	0.9496	0.9574
	0.5891	1.5023	0.1203	0.231	0.8042	0.1185	0.8443	0.497	1.0165	0.8726	0.9574
	0.1283	0.9281	0.2082	0.4003	0.8042	4.7236	3.7609	4.1081	0.5702	4.8312	0.4666
	0.218	0.1071	0.1029	0.2718	0.9712	1.6733	0.1903	0.1685	0.5929	1.8354	0.5466
	0.3287	0.5691	0.006	0.4642	1.009	0.7419	0.5377	0.3131	0.3714	0.4986	0.1728
	0.62	0.5916	0.1322	0.6285	0.9159	0.8538	0.6981	0.2839	0.381	0.7302	1.0547
	0.2733	0.1705	0.345	0.3408	0.8995	1.1558	0.4227	0.3509	0.7889	0.5435	1.4423
	1.0516	0.1647	0.9806	0.0191	0.9712	1.0657	0.7609	0.3509	0.1611	0.6537	
	1.0127	1.1978	0.4314	0.516	1.2512	1.2547				0.4051	1.7618
	0.5504	0.2464	0.3708	0.6962	1.3612	1.5899			1.4652	0.7368	2.6287
	0.8975	1.2591	0.3136	0.5707	1.2742	1.7061	1.5976	0.4309	1.5092	0.5004	2.234
bar z_i =	0.4943	0.6417	0.3504	0.939	1.052	1.0041	0.7111	0.5841	1.147	1.0695	1.2884
n_i * bar z_i^2 =	5.375	8.647	1.9642	18.516	23.239	20.165	9.1014	6.1416	24.998	22.876	26.561

bar z = 0.8438
N = 212

	SS	df	MS	F_{Ratio}	$F_{critical}$
Between Wells	16.65	10	1.66	1.56	1.67
Error	213.85	201	1.06		
Total	230.50	211			

Since the F-ratio = 1.56 does not exceed the tabulated value of F-critical = 1.67 (see Table 2 of IFG) with 10 and 201 df, the assumption of equal means should be accepted.
Proceed with further statistical tests using the log-transformed values shown above.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J10-1957-20

Compound: **Total Barium**
NC MCL (mg/l): 2000
Method: Skewness Test for Normality
Background: MW-11S, MW-11D, & MW-14

	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MDL
4/24/00	**250**	NS	NS	**240**	**420**	**200**	**63**	**300**	**93**	**230**	NS	**5**
6/26/00	**300**	**67**	NS	NS	NS	NS	NS	NS	NS	NS	NS	**5**
7/26/00	**330**	**30**	NS	NS	NS	NS	NS	NS	NS	NS	NS	**5**
9/18/00	NS	NS	NS	**330**	**92**	NS	NS	NS	NT	NS	NS	**500**
4/9/01	**1300**	**380**	NS	**180**	**330**	**120**	**80**	**290**	**360**	**970**	NS	**5**
9/18/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**5**
10/29/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**5**
1/30/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**5**
2/28/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**500**
4/15/02	**1300**	**41**	NS	ND	ND	**160**	**23**	**190**	**460**	**1400**	NS	**5**
9/26/02	**330**	**500**	**750**	**4200**	**120**	**230**	**93**	**410**	**910**	**1400**	**11000**	**5**
4/28/03	**600**	**66**	**220**	**1800**	**160**	**140**	**110**	**92**	**360**	**800**	**2800**	**5**
10/30/03	**320**	**100**	NT	**210**	**310**	**130**	**95**	**110**	**1200**	**270**	**4900**	**5**
4/20/04	**320**	**56**	**120**	**410**	**460**	**170**	**140**	**210**	**62**	**940**	**2000**	**5**
10/21/04	**320**	**40**	**200**	**300**	**310**	**140**	**140**	**130**	**12**	**900**	**4900**	**5**
4/18/05	**480**	**55**	**160**	**7200**	**610**	**180**	**160**	**140**	**12**	**1000**	**3700**	**5**
10/13/05	**770**	**37**	**160**	**1700**	**870**	**250**	**160**	**140**	**27**	**810**	**2700**	**5**
4/25/06	**650**	ND	ND	ND	**1100**	ND	ND	ND	ND	**750**	**2700**	**500**
10/20/06	**410**	**22**	**180**	**470**	**1100**	ND	ND	ND	**160**	ND	**650**	**5**
4/25/07	**290**	ND	**200**	**240**	**1300**	**1500**	**130**	**180**	ND	ND	**600**	**100**
10/31/07	**501**	**31.5**	**223**	**198**	**1350**	**591**	**184**	**208**	**62.4**	**516**	**872**	**5**
4/23/08	**194**	**30.8**	**253**	**168**	**1230**	**661**	**216**	**202**	**61.8**	**151**	**361**	**5**
10/20/08	**474**	**66**	**313**	**224**	**1210**	**894**	**164**	**216**	**41.1**	**182**	**245**	**5**
4/22/09	**126**	**47.2**	**591**	**309**	**1300**	**817**	**230**	**216**	**77**	**163**	NS	**5**
10/26/09	**131**	**16.8**	**144**	**188**	**1720**	**987**	NS	NS	NS	**209**	**178**	**5**
4/22/10	**208**	**43.5**	**153**	**157**	**1920**	**1380**	NS	NS	**20.9**	**150**	**74.8**	**5**
10/27/10	**147**	**15.8**	**162**	**178**	**1760**	**1550**	**531**	**234**	**20**	**190**	**111**	**5**

If not detected (ND), use half of the detection limit.

250			240	420	200	63	300	93	230	
300	67									
330	30									
			330	92						
1300	380		180	330	120	80	290	360	970	
1300	41		2.5	2.5	160	23	190	460	1400	
330	500	750	4200	120	230	93	410	910	1400	11000
600	66	220	1800	160	140	110	92	360	800	2800
320	100		210	310	130	95	110	1200	270	4900
320	56	120	410	460	170	140	210	62	940	2000
320	40	200	300	310	140	140	130	12	900	4900
480	55	160	7200	610	180	160	140	12	1000	3700
770	37	160	1700	870	250	160	140	27	810	2700
650	250	250	250	1100	250	250	250	250	750	2700
410	22	180	470	1100	2.5	2.5	2.5	160	2.5	650
290	50	200	240	1300	1500	130	180	50	50	600

501	31.5	223	198	1350	591	184	208	62.4	516	872
194	30.8	253	168	1230	661	216	202	61.8	151	361
474	66	313	224	1210	894	164	216	41.1	182	245
126	47.2	591	309	1300	817	230	216	77	163	
131	16.8	144	188	1720	987				209	178
208	43.5	153	157	1920	1380			20.9	150	74.8
147	15.8	162	178	1760	1550	531	234	20	190	111

X_i values =

-3E+07			-4E+07	-4E+06	-5E+07	-1E+08	-2E+07	-1E+08	-4E+07
-2E+07	-1E+08								
-1E+07	-2E+08								
			-1E+07	-1E+08					
4E+08	-8E+06		-6E+07	-1E+07	-9E+07	-1E+08	-2E+07	-1E+07	6E+07
4E+08	-2E+08		-2E+08	-2E+08	-7E+07	-2E+08	-6E+07	-2E+06	6E+08
-1E+07	-4E+05	5E+06	5E+10	-9E+07	-4E+07	-1E+08	-5E+06	4E+07	6E+08	1E+12
13408	-1E+08	-5E+07	2E+09	-7E+07	-8E+07	-1E+08	-1E+08	-1E+07	1E+07	1E+10
-2E+07	-1E+08		-5E+07	-2E+07	-9E+07	-1E+08	-1E+08	2E+08	-3E+07	8E+10
-2E+07	-1E+08	-9E+07	-5E+06	-2E+06	-7E+07	-8E+07	-5E+07	-1E+08	5E+07	3E+09
-2E+07	-2E+08	-5E+07	-2E+07	-2E+07	-8E+07	-8E+07	-9E+07	-2E+08	3E+07	8E+10
-9E+05	-1E+08	-7E+07	3E+11	38466	-6E+07	-7E+07	-8E+07	-2E+08	8E+07	3E+10
7E+06	-2E+08	-7E+07	1E+09	3E+07	-3E+07	-7E+07	-8E+07	-2E+08	1E+07	1E+10
401239	-3E+07	-3E+07	-3E+07	1E+08	-3E+07	-3E+07	-3E+07	-3E+07	5E+06	1E+10
-5E+06	-2E+08	-6E+07	-1E+06	1E+08	-2E+08	-2E+08	-2E+08	-7E+07	-2E+08	401239
-2E+07	-1E+08	-5E+07	-4E+07	4E+08	8E+08	-9E+07	-6E+07	-1E+08	-1E+08	13408
-4E+05	-2E+08	-4E+07	-5E+07	5E+08	3213.4	-6E+07	-5E+07	-1E+08	-2E+05	3E+07
-6E+07	-2E+08	-3E+07	-7E+07	3E+08	608864	-5E+07	-5E+07	-1E+08	-8E+07	-1E+07
-1E+06	-1E+08	-2E+07	-4E+07	3E+08	3E+07	-7E+07	-5E+07	-2E+08	-6E+07	-4E+07
-9E+07	-1E+08	3213.4	-2E+07	4E+08	1E+07	-4E+07	-5E+07	-1E+08	-7E+07	
-9E+07	-2E+08	-8E+07	-6E+07	1E+09	7E+07				-5E+07	-6E+07
-5E+07	-2E+08	-8E+07	-7E+07	2E+09	5E+08			-2E+08	-8E+07	-1E+08
-8E+07	-2E+08	-7E+07	-6E+07	2E+09	9E+08	-92612	-4E+07	-2E+08	-6E+07	-1E+08

X_{bar} = 576.24
SD = 1136.4
N = 212
$1/NS_i(X_i-X_{bar})^3$ = 8E+09
g_1 = 5.5015

Since the Coefficient of Skewness of 5.50 is greater than 1.0, the data appear to be significantly skewed.
Do not assume that the data follow a Normal distribution.
Perform the Skewness Test on the natural log of the values.

ln =

MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15
5.5215			5.4806	6.0403	5.2983	4.1431	5.7038	4.5326	5.4381	
5.7038	4.2047									
5.7991	3.4012									
			5.7991	4.5218						
7.1701	5.9402		5.193	5.7991	4.7875	4.382	5.6699	5.8861	6.8773	

7.1701	3.7136		0.9163	0.9163	5.0752	3.1355	5.247	6.1312	7.2442	
5.7991	6.2146	6.6201	8.3428	4.7875	5.4381	4.5326	6.0162	6.8134	7.2442	9.3057
6.3969	4.1897	5.3936	7.4955	5.0752	4.9416	4.7005	4.5218	5.8861	6.6846	7.9374
5.7683	4.6052		5.3471	5.7366	4.8675	4.5539	4.7005	7.0901	5.5984	8.497
5.7683	4.0254	4.7875	6.0162	6.1312	5.1358	4.9416	5.3471	4.1271	6.8459	7.6009
5.7683	3.6889	5.2983	5.7038	5.7366	4.9416	4.9416	4.8675	2.4849	6.8024	8.497
6.1738	4.0073	5.0752	8.8818	6.4135	5.193	5.0752	4.9416	2.4849	6.9078	8.2161
6.6464	3.6109	5.0752	7.4384	6.7685	5.5215	5.0752	4.9416	3.2958	6.697	7.901
6.477	5.5215	5.5215	5.5215	7.0031	5.5215	5.5215	5.5215	5.5215	6.6201	7.901
6.0162	3.091	5.193	6.1527	7.0031	0.9163	0.9163	0.9163	5.0752	0.9163	6.477
5.6699	3.912	5.2983	5.4806	7.1701	7.3132	4.8675	5.193	3.912	3.912	6.3969
6.2166	3.45	5.4072	5.2883	7.2079	6.3818	5.2149	5.3375	4.1336	6.2461	6.7708
5.2679	3.4275	5.5334	5.124	7.1148	6.4938	5.3753	5.3083	4.1239	5.0173	5.8889
6.1612	4.1897	5.7462	5.4116	7.0984	6.7957	5.0999	5.3753	3.716	5.204	5.5013
4.8363	3.8544	6.3818	5.7333	7.1701	6.7056	5.4381	5.3753	4.3438	5.0938	
4.8752	2.8214	4.9698	5.2364	7.4501	6.8947				5.3423	5.1818
5.3375	3.7728	5.0304	5.0562	7.5601	7.2298			3.0397	5.0106	4.3148
4.9904	2.76	5.0876	5.1818	7.4731	7.346	6.2748	5.4553	2.9957	5.247	4.7095

X_i values =	0.0009		0.0002	0.2313	-0.002	-2.113	0.0213	-0.714	2E-06	
	0.0213	-1.824								
	0.0518	-8.306								
			0.0518	-0.74						
	5.3017	0.1356	-0.013	0.0518	-0.261	-1.139	0.0144	0.0971	3.0542	
	5.3017	-5.025	-91.74	-91.74	-0.043	-12.02	-0.006	0.3501	6.0068	
	0.0518	0.4897	1.7007	24.806	-0.261	2E-06	-0.714	0.2051	2.6684	6.0068	58.376
	0.9141	-1.892	-4E-05	8.8585	-0.043	-0.114	-0.383	-0.74	0.0971	1.9918	15.831
	0.04	-0.554		-5E-04	0.0298	-0.175	-0.664	-0.383	4.6046	0.0051	28.951
	0.04	-2.75	-0.261	0.2051	0.3501	-0.025	-0.114	-5E-04	-2.193	2.86	10.282
	0.04	-5.246	-0.002	0.0213	0.0298	-0.114	-0.114	-0.175	-25.45	2.6052	28.951
	0.4175	-2.858	-0.043	41.257	0.9616	-0.013	-0.043	-0.114	-25.45	3.2506	21.71
	1.8157	-5.984	-0.043	8.1445	2.4173	0.0009	-0.043	-0.114	-9.671	2.0514	15.153
	1.1595	0.0009	0.0009	0.0009	3.9193	0.0009	0.0009	0.0009	0.0009	1.7007	15.153
	0.2051	-12.74	-0.013	0.3832	3.9193	-91.74	-91.74	-91.74	-0.043	-91.74	1.1595
	0.0144	-3.473	-0.002	0.0002	5.3017	6.7171	-0.175	-0.013	-3.473	-3.473	0.9141
	0.4934	-7.72	-7E-06	-0.003	5.6535	0.8721	-0.009	-7E-04	-2.161	0.5507	2.4297
	-0.004	-7.987	0.0012	-0.028	4.8127	1.2159	-1E-04	-0.002	-2.21	-0.068	0.0989
	0.3967	-1.892	0.0327	-3E-06	4.6739	2.5674	-0.035	-1E-04	-5.004	-0.011	0.0004
	-0.206	-3.885	0.8721	0.0289	5.3017	2.0933	2E-06	-1E-04	-1.269	-0.037	
	-0.167	-17.68	-0.095	-0.007	8.2873	3.1652				-6E-04	-0.015
	-7E-04	-4.522	-0.062	-0.051	9.7135	5.8653			-13.59	-0.072	-1.374
	-0.083	-18.96	-0.039	-0.015	8.573	7.0734	0.6105	2E-05	-14.36	-0.006	-0.368

X_{bar} = 5.4264
SD = 1.4529
N = 212
$1/NS_i(X_i-X_{bar})^3$ = -1.707
g_1 = 0.5608

Since the Coefficient of Skewness of 0.56 is less than 1.0, the data appear not to be significantly skewed.
Proceed with further statistical tests using the log-transformed values shown above.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J10-1957-20

Compound: **Total Barium**
NC MCL (mg/l): 2000
Method: Shewhart-CUSUM Control Chart

Part 1: Check for Normality

	MW-2	MDL
9/26/2002	**120**	**5**
4/28/2003	**160**	**5**
10/30/2003	**310**	**5**
4/20/2004	**460**	**5**
10/21/2004	**310**	**5**
4/18/2005	**610**	**5**
10/13/2005	**870**	**5**
4/25/2006	**1100**	**500**
10/20/2006	**1100**	**5**
4/25/2007	**1300**	**100**
10/31/2007	**1350**	**5**
4/23/2008	**1230**	**5**
10/20/2008	**1210**	**5**
4/22/2009	**1300**	**5**
10/26/2009	**1720**	**5**
4/22/2010	**1920**	**5**
10/27/2010	**1760**	**5**

If not detected (ND), use half of the detection limit.

	X_i values =
120	-6.59E+08
160	-5.72E+08
310	-3.14E+08
460	-1.49E+08
310	-3.14E+08
610	-54872000
870	-1728000
1100	1331000
1100	1331000
1300	29791000
1350	46656000
1230	13824000
1210	10648000
1300	29791000
1720	389017000
1920	804357000
1760	456533000

X_{bar} = 990
SD = 572.9856
N = 17
$1/N\Sigma_i(X_i-X_{bar})^3$ = -16550118
g_1 = 0.0963526

Since the Coefficient of Skewness of 0.10 is less than 1.0, the data appear not to be significantly skewed.
Proceed with further statistical tests using the real detected values shown above.

ln =	X_i values =
4.7874917	-6.369286
5.0751738	-3.840233
5.7365723	-0.740187
6.1312265	-0.132593
5.7365723	-0.740187
6.413459	-0.011805
6.7684932	0.0020649
7.0030655	0.0474037
7.0030655	0.0474037
7.1701195	0.1480082
7.2078599	0.1820022
7.1147694	0.1062384
7.0983756	0.0955839
7.1701195	0.1480082
7.4500796	0.5293319
7.5600805	0.775969
7.4730691	0.5757571

X_{bar} = 6.6411525
SD = 0.8522007
N = 17
$1/N\Sigma_i(X_i-X_{bar})^3$ = -0.539795
g_1 = 0.9552054

Use the real values (not log-transformed) indicated in the previous section.

Part 2: Shewhart-CUSUM Control Chart

Date	MW-2	MDL	Data for Testing
9/26/2002	**120**	5	120
4/28/2003	**160**	5	160
10/30/2003	**310**	5	310
4/20/2004	**460**	5	460
10/21/2004	**310**	5	310
4/18/2005	**610**	5	610
10/13/2005	**870**	5	870
4/25/2006	**1100**	500	1100
10/20/2006	**1100**	5	1100
4/25/2007	**1300**	100	1300
10/31/2007	**1350**	5	1350
4/23/2008	**1230**	5	1230
10/20/2008	**1210**	5	1210
4/22/2009	**1300**	5	1300
10/26/2009	**1720**	5	1720
4/22/2010	**1920**	5	1920
10/27/2010	**1760**	5	1760

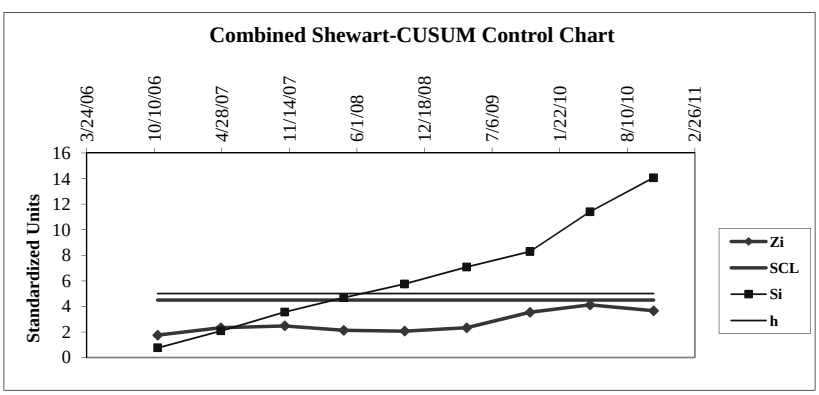
Compute the mean and standard deviation of the historical data:

492.5 = x_{mean} (Mean of N1-N8 historical data)
346.89438 = s (Standard Deviation of N1-N8 historical data)
1 = k (constant, reference value)
5 = h (constant, upper control limit for the CUSUM scheme)
4.5 = SCL (Constant, upper Shewhart Control Limit)

Compute the standardized mean (Z_i) and the cumulative sum (S_i) for each concentration.

Date	x_i	Z_i	S_i	h	SCL
			0		
10/20/2006	1100	1.7512535	0.7512535	5	4.5
4/25/2007	1300	2.3277978	2.0790513	5	4.5
10/31/2007	1350	2.4719339	3.5509853	5	4.5
4/23/2008	1230	2.1260073	4.6769926	5	4.5
10/20/2008	**1210**	2.0683529	**5.7453454**	5	4.5
4/22/2009	**1300**	2.3277978	**7.0731433**	5	4.5
10/26/2009	**1720**	3.538541	**8.2838864**	5	4.5
4/22/2010	**1920**	4.1150853	**11.398972**	5	4.5
10/27/2010	**1760**	3.6538499	**14.052822**	5	4.5

Plot Z_i and S_i versus time:



Compare the Z_i and S_i values to their respective control limits of SCL and h.
One, or both, of the control limits was exceeded. Therefore, there is statistically significant evidence of contamination in this well at the concentrations indicated above.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J10-1957-20

Compound: **Total Barium**
NC MCL (mg/l): 2000
Method: Shewhart-CUSUM Control Chart

Part 1: Check for Normality

	MW-15	MDL
9/26/2002	**11000**	**5**
4/28/2003	**2800**	**5**
10/30/2003	**4900**	**5**
4/20/2004	**2000**	**5**
10/21/2004	**4900**	**5**
4/18/2005	**3700**	**5**
10/13/2005	**2700**	**5**
4/25/2006	**2700**	**500**
10/20/2006	**650**	**5**
4/25/2007	**600**	**100**
10/31/2007	**872**	**5**
4/23/2008	**361**	**5**
10/20/2008	**245**	**5**
4/22/2009	NS	**5**
10/26/2009	**178**	**5**
4/22/2010	**74.8**	**5**
10/27/2010	**111**	**5**

If not detected (ND), use half of the detection limit.

	X_i values =
11000	6.445E+11
2800	84034866
4900	1.635E+10
2000	-47433014
4900	1.635E+10
3700	2.395E+09
2700	38618756
2700	38618756
650	-5.02E+09
600	-5.47E+09
872	-3.31E+09
361	-8.01E+09
245	-9.49E+09
178	-1.04E+10
74.8	-1.2E+10
111	-1.14E+10

X_{bar} = 2361.9875
SD = 2847.7953
N = 16
$1/NS_i(X_i-X_{bar})^3$ = 3.842E+10
g_1 = 1.8324222

Since the Coefficient of Skewness of 1.83 is greater than 1.0, the real data appear to be significantly skewed.
Do not assume that the data follow a Normal distribution.
Perform the Skewness Test on the natural log of the values.

ln =	X_i values =
9.3056506	13.179207
7.9373747	0.9815568
8.4969905	3.7486504
7.6009025	0.2840363
8.4969905	3.7486504
8.2160881	2.060637
7.9010071	0.8776946
7.9010071	0.8776946
6.4769724	-0.101578
6.3969297	-0.163336
6.7707894	-0.005157
5.888878	-1.173182
5.5012582	-3.00033
5.1817836	-5.468307
4.3148179	-18.16537
4.7095302	-11.1498

X_{bar} = 6.9435606
SD = 1.5060378
N = 16
$1/NS_i(X_i-X_{bar})^3$ = -0.841809
g_1 = 0.2714869

Since the Coefficient of Skewness of 0.27 is less than 1.0, the data appear not to be significantly skewed. Proceed with further statistical tests using the log-transformed values shown above.

Part 2: Shewhart-CUSUM Control Chart

Date	MW-15	MDL	Data for Testing
9/26/2002	**11000**	5	9.3056506
4/28/2003	**2800**	5	7.9373747
10/30/2003	**4900**	5	8.4969905
4/20/2004	**2000**	5	7.6009025
10/21/2004	**4900**	5	8.4969905
4/18/2005	**3700**	5	8.2160881
10/13/2005	**2700**	5	7.9010071
4/25/2006	**2700**	500	7.9010071
10/20/2006	**650**	5	6.4769724
4/25/2007	**600**	100	6.3969297
10/31/2007	**872**	5	6.7707894
4/23/2008	**361**	5	5.888878
10/20/2008	**245**	5	5.5012582
4/22/2009	NS	5	-
10/26/2009	**178**	5	5.1817836
4/22/2010	**74.8**	5	4.3148179
10/27/2010	**111**	5	4.7095302

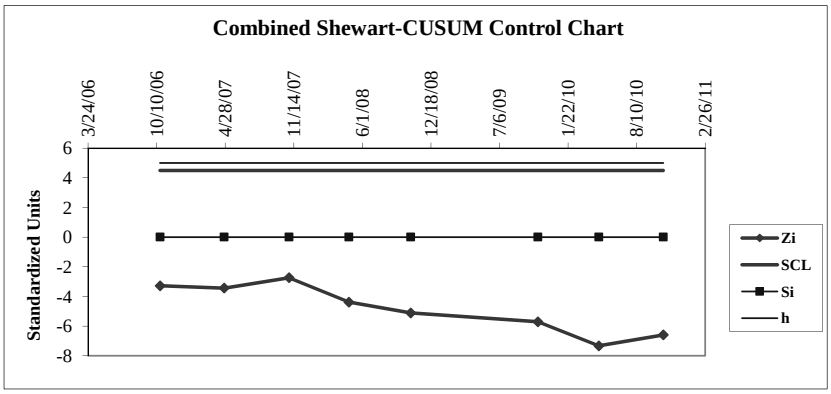
Compute the mean and standard deviation of the historical data:

8.2320014 = x_{mean} (Mean of N1-N8 historical data)
0.5342043 = s (Standard Deviation of N1-N8 historical data)
1 = k (constant, reference value)
5 = h (constant, upper control limit for the CUSUM scheme)
4.5 = SCL (Constant, upper Shewhart Control Limit)

Compute the standardized mean (Z_i) and the cumulative sum (S_i) for each concentration.

Date	x_i	Z_i	S_i	h	SCL
			0		
10/20/2006	6.4769724	-3.2853144	0	5	4.5
4/25/2007	6.3969297	-3.4351498	0	5	4.5
10/31/2007	6.7707894	-2.7353056	0	5	4.5
4/23/2008	5.888878	-4.3861937	0	5	4.5
10/20/2008	5.5012582	-5.1117958	0	5	4.5
10/26/2009	5.1817836	-5.7098342	0	5	4.5
4/22/2010	4.3148179	-7.3327445	0	5	4.5
10/27/2010	4.7095302	-6.5938655	0	5	4.5

Plot Z_i and S_i versus time:



Compare the Z_i and S_i values to their respective control limits of SCL and h.
The limits were not exceeded and do not indicate statistically significant evidence of contamination at the site.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J10-1957-20

Compound: **Total Beryllium**
NC MCL (mg/l): Not Established
Method: Kruskal-Wallis
Background: MW-11S, MW-11D, & MW-14

	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MDL
04/24/00	**4.4**	NS	NS	ND	**2**	ND	**2.2**	ND	ND	ND	NS	**2**
06/26/00	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	**2**
07/26/00	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	**2**
09/18/00	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	**2**
04/09/01	**2.3**	**7**	NS	ND	ND	ND	ND	ND	**2.4**	**4.8**	NS	**2**
09/18/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**2**
10/29/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**2**
01/30/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**2**
02/28/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**2**
04/15/02	**2.1**	ND	NS	ND	ND	ND	ND	ND	**2.5**	**5**	NS	**2**
09/26/02	ND	**7**	**2.1**	**5.1**	ND	ND	ND	ND	**8.5**	**4.7**	**95**	**2**
04/28/03	ND	ND	ND	ND	ND	ND	ND	ND	**2**	**2.2**	**20**	**2**
10/30/03	ND	ND	NT	ND	ND	ND	ND	ND	**2.4**	ND	**33**	**1**
04/20/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**21**	**1**
10/21/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1.4**	**28**	**1**
04/18/05	ND	ND	ND	**7.2**	ND	ND	ND	ND	ND	**3.8**	**26**	**1**
10/13/05	ND	ND	ND	**3**	ND	ND	ND	ND	ND	**3.4**	**21**	**1**
04/25/06	ND	ND	ND	ND	ND	ND	ND	ND	**2.1**	ND	**17**	**2**
10/20/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5.7**	**1**
04/25/07	ND	ND	ND	ND	ND	**14**	ND	ND	ND	ND	**4.9**	**1**
10/31/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**6**	**1**
04/23/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**3**	**1**
10/20/08	ND	**1.2**	ND	ND	ND	ND	ND	ND	ND	ND	**1.9**	**1**
04/22/09	ND	ND	**1.5**	ND	ND	ND	ND	ND	ND	ND	NS	**1**
10/26/09	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	**1.7**	**1**
04/22/10	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	**1**
10/27/10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**
N_i	22	21	16	20	20	20	18	18	19	20	16	
sum of rank values (R_i)	2165.0	2097.0	1540.0	2026.5	1790.5	1817.0	1625.5	1530.0	2211.5	2409.5	2942.5	
avg rank value (Rbar)	98.4	99.9	96.3	101.3	89.5	90.9	90.3	85.0	116.4	120.5	183.9	

	Number of each rank value											Rank Value
rank value of NDs =	19	18	14	17	19	19	17	18	13	13	2	85
rank value of 1.2s =	0	1	0	0	0	0	0	0	0	0	0	170
rank value of 1.4s =	0	0	0	0	0	0	0	0	0	1	0	171
rank value of 1.5s =	0	0	1	0	0	0	0	0	0	0	0	172
rank value of 1.7s =	0	0	0	0	0	0	0	0	0	0	1	173
rank value of 1.9s =	0	0	0	0	0	0	0	0	0	0	1	174
rank value of 2s =	0	0	0	0	1	0	0	0	1	0	0	175.5
rank value of 2.1s =	1	0	1	0	0	0	0	0	1	0	0	178
rank value of 2.2s =	0	0	0	0	0	0	1	0	0	1	0	180.5
rank value of 2.3s =	1	0	0	0	0	0	0	0	0	0	0	182
rank value of 2.4s =	0	0	0	0	0	0	0	0	2	0	0	183.5
rank value of 2.5s =	0	0	0	0	0	0	0	0	1	0	0	185
rank value of 3s =	0	0	0	1	0	0	0	0	0	0	1	186.5
rank value of 3.4s =	0	0	0	0	0	0	0	0	0	1	0	188
rank value of 3.8s =	0	0	0	0	0	0	0	0	0	1	0	189
rank value of 4.4s =	1	0	0	0	0	0	0	0	0	0	0	190
rank value of 4.5s =	0	0	0	0	0	0	0	0	0	1	0	191
rank value of 4.7s =	0	0	0	0	0	0	0	0	0	1	0	192
rank value of 4.8s =	0	0	0	0	0	0	0	0	0	1	0	193
rank value of 4.9s =	0	0	0	0	0	0	0	0	0	0	1	194
rank value of 5.1s =	0	0	0	1	0	0	0	0	0	0	0	195

rank value of 5.7s =	0	0	0	0	0	0	0	0	0	0	1	196
rank value of 6s =	0	0	0	0	0	0	0	0	0	0	1	197
rank value of 7s =	0	2	0	0	0	0	0	0	0	0	0	198.5
rank value of 7.2s =	0	0	0	1	0	0	0	0	0	0	0	200
rank value of 8.5s =	0	0	0	0	0	0	0	0	1	0	0	201
rank value of 14s =	0	0	0	0	0	1	0	0	0	0	0	202
rank value of 17s =	0	0	0	0	0	0	0	0	0	0	1	203
rank value of 20s =	0	0	0	0	0	0	0	0	0	0	1	204
rank value of 21s =	0	0	0	0	0	0	0	0	0	0	2	205.5
rank value of 26s =	0	0	0	0	0	0	0	0	0	0	1	207
rank value of 28s =	0	0	0	0	0	0	0	0	0	0	1	208
rank value of 33s =	0	0	0	0	0	0	0	0	0	0	1	209
rank value of 95s =	0	0	0	0	0	0	0	0	0	0	1	210
n =	**22**	**21**	**16**	**20**	**20**	**20**	**18**	**18**	**19**	**20**	**16**	

Sum of rank value calculations

1615	1530	1190	1445	1615	1615	1445	1530	1105	1105	170
0	170	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	171	0
0	0	172	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	173
0	0	0	0	0	0	0	0	0	0	174
0	0	0	0	175.5	0	0	0	175.5	0	0
178	0	178	0	0	0	0	0	178	0	0
0	0	0	0	0	0	180.5	0	0	180.5	0
182	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	367	0	0
0	0	0	0	0	0	0	0	185	0	0
0	0	0	186.5	0	0	0	0	0	0	186.5
0	0	0	0	0	0	0	0	0	188	0
0	0	0	0	0	0	0	0	0	189	0
190	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	191	0
0	0	0	0	0	0	0	0	0	192	0
0	0	0	0	0	0	0	0	0	193	0
0	0	0	0	0	0	0	0	0	0	194
0	0	0	195	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	196
0	0	0	0	0	0	0	0	0	0	197
0	397	0	0	0	0	0	0	0	0	0
0	0	0	200	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	201	0	0
0	0	0	0	0	202	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	203
0	0	0	0	0	0	0	0	0	0	204
0	0	0	0	0	0	0	0	0	0	411
0	0	0	0	0	0	0	0	0	0	207
0	0	0	0	0	0	0	0	0	0	208
0	0	0	0	0	0	0	0	0	0	209
0	0	0	0	0	0	0	0	0	0	210

sum of rank values (R_i)	**2165**	**2097**	**1540**	**2026.5**	**1790.5**	**1817**	**1625.5**	**1530**	**2211.5**	**2409.5**	**2942.5**

Compute the Kruskal-Wallis statistic:

$$H = \{[12/N(N+1)] * [\sum_{i=1}^{K} (R_i^2)/N_i]\} -3(N+1)$$

Well =	**Background**	**MW-1A**	**MW-2**	**MW-2D**	**MW-3**	**MW-3D**	**MW-4A**	**MW-8**	**MW-15**
Ri^2/N_i =	570562.8	205335	160295	165074	146792	130050	257407	290285	541144

$N_{i\,bg}$ = 59
N = 210
H = 35.10

Adjust H for ties:

T_i = 5E+06 sum of T1..T6

$H' = H/(1-(T_i/(N^3-N)))$
H' = 73.30
Chi-square = 15.51

Compare the calculated value H' to the tabulated Chi-square value with K-1 = # groups -1 = 17df at the 5% significance level from Table 1 of the IFG. The value is 15.51 which is less than H' =73.30.
Therefore, there is evidence of significant differences between the well groups.
Post-hoc pairwise comparisons are necessary (see below).

Calculate the critical values to compare each compliance well to the background wells:

Critical Value (C_x) = $P(N(N+1)/12)^{0.5} * (1/N_{i\,bg}+1/N_x)^{0.5}$
P = 2.33 Percentile of Standard Normal Distribution
from Table 4 of IFG
N = total sample size
$N_{i\,bg}$ = total samples (N_i) of background data
N_x = total samples (N_i) of well x

Difference between average ranks (Dx) = Rbar (well x) - avg Rbar (background)

Well =	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	**MW-15**
Rbar (well x) =	101.3	89.5	90.9	90.3	85.0	116.4	120.5	183.9
avg Rbar (background) =	98.3	98.3	98.3	98.3	98.3	98.3	98.3	98.3
Dx =	3.0	-8.8	-7.5	-8.0	-13.3	18.1	22.1	85.6
Cx =	36.6	36.6	36.6	38.1	38.1	37.3	36.6	39.9
Statistical Significance ?	No	No	No	No	No	No	No	**Yes**
If SSI, is current event above MCL?	-	-	-	-	-	-	-	NE

Compare each difference (Dx) with the corresponding critical value (Cx).
The Dx value for the above indicated wells do exceed the corresponding Cx value.
Therefore, we conclude that the concentration of Total Beryllium averaged over these compliance wells are significantly greater than that of the background wells.
Shewart-CUSUM Control Charts should be performed for each failing well to check for statistical significance.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J10-1957-20

Compound: **Total Beryllium**
NC MCL (mg/l): Not Established
Method: Shewhart-CUSUM Control Chart

Part 1: Check for Normality

	MW-15	MDL
9/26/2002	**95**	**2**
4/28/2003	**20**	**2**
10/30/2003	**33**	**1**
4/20/2004	**21**	**1**
10/21/2004	**28**	**1**
4/18/2005	**26**	**1**
10/13/2005	**21**	**1**
4/25/2006	**17**	**2**
10/20/2006	**5.7**	**1**
4/25/2007	**4.9**	**1**
10/31/2007	**6**	**1**
4/23/2008	**3**	**1**
10/20/2008	**1.9**	**1**
4/22/2009	NS	**1**
10/26/2009	**1.7**	**1**
4/22/2010	ND	**1**
10/27/2010	ND	**1**

If not detected (ND), use half of the detection limit.

95	X_i values =	459652.8
20		10.289109
33		3494.5085
21		32.005984
28		1053.4241
26		546.34036
21		32.005984
17		-0.561516
5.7		-1782.564
4.9		-2159.194
6		-1653.497
3		-3258.248
1.9		-4038.67
1.7		-4192.752
0.5		-5200.196
0.5		-5200.196

X_{bar} = 17.825
SD = 23.337823
N = 16
$1/NS_i(X_i-X_{bar})^3$ = 27333.469
g_1 = 2.3689549

Since the Coefficient of Skewness of 2.37 is greater than 1.0, the real data appear to be significantly skewed.
Do not assume that the data follow a Normal distribution.
Perform the Skewness Test on the natural log of the values.

ln =	4.5538769	X_i values = 15.975749
	2.9957323	0.885908
	3.4965076	3.1198097
	3.0445224	1.0278971
	3.3322045	2.1813
	3.2580965	1.8283254
	3.0445224	1.0278971
	2.8332133	0.5079877
	1.7404662	-0.025631
	1.5892352	-0.08876
	1.7917595	-0.014446
	1.0986123	-0.821857
	0.6418539	-2.705693
	0.5306283	-3.406691
	-0.693147	-20.31191
	-0.693147	-20.31191

X_{bar} = 2.0353086
SD = 1.5398892
N = 16
$1/NS_i(X_i-X_{bar})^3$ = -1.320751
g_1 = 0.3984702

Since the Coefficient of Skewness of 0.40 is less than 1.0, the data appear not to be significantly skewed. Proceed with further statistical tests using the log-transformed values shown above.

Part 2: Shewhart-CUSUM Control Chart

Date	MW-15	MDL	Data for Testing
9/26/2002	**95**	2	4.5538769
4/28/2003	**20**	2	2.9957323
10/30/2003	**33**	1	3.4965076
4/20/2004	**21**	1	3.0445224
10/21/2004	**28**	1	3.3322045
4/18/2005	**26**	1	3.2580965
10/13/2005	**21**	1	3.0445224
4/25/2006	**17**	2	2.8332133
10/20/2006	**5.7**	1	1.7404662
4/25/2007	**4.9**	1	1.5892352
10/31/2007	**6**	1	1.7917595
4/23/2008	**3**	1	1.0986123
10/20/2008	**1.9**	1	0.6418539
4/22/2009	NS	1	-
10/26/2009	**1.7**	1	0.5306283
4/22/2010	ND	1	-0.693147
10/27/2010	ND	1	-0.693147

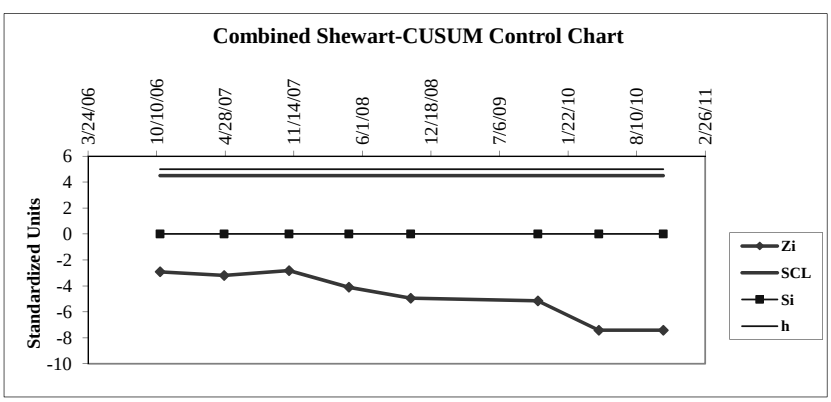
Compute the mean and standard deviation of the historical data:

3.3198345 = x_{mean} (Mean of N1-N8 historical data)
0.5413573 = s (Standard Deviation of N1-N8 historical data)
1 = k (constant, reference value)
5 = h (constant, upper control limit for the CUSUM scheme)
4.5 = SCL (Constant, upper Shewhart Control Limit)

Compute the standardized mean (Z_i) and the cumulative sum (S_i) for each concentration.

Date	x_i	Z_i	S_i	h	SCL
			0		
10/20/2006	1.7404662	-2.9174229	0	5	4.5
4/25/2007	1.5892352	-3.1967781	0	5	4.5
10/31/2007	1.7917595	-2.8226735	0	5	4.5
4/23/2008	1.0986123	-4.103061	0	5	4.5
10/20/2008	0.6418539	-4.9467891	0	5	4.5
10/26/2009	0.5306283	-5.152246	0	5	4.5
4/22/2010	-0.693147	-7.4128146	0	5	4.5
10/27/2010	-0.693147	-7.4128146	0	5	4.5

Plot Z_i and S_i versus time:



Compare the Z_i and S_i values to their respective control limits of SCL and h.
The limits were not exceeded and do not indicate statistically significant evidence of contamination at the site.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J10-1957-20

Compound: **Total Cadmium**
NC MCL (mg/l): 1.75
Method: Kruskal-Wallis
Background: MW-11S, MW-11D, & MW-14

	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MDL
04/24/00	**2**	NS	NS	ND	**1.3**	**1.2**	**1.3**	**2.1**	ND	**5.4**	NS	**1**
06/26/00	**1.6**	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	**1**
07/26/00	**1.1**	**3.2**	NS	NS	NS	NS	NS	NS	NS	NS	NS	**1**
09/18/00	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	**1**
04/09/01	**130**	**2**	NS	ND	ND	ND	**1.7**	**1.8**	**2.7**	**19**	NS	**1**
09/18/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**1**
10/29/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**1**
01/30/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**1**
02/28/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**1**
04/15/02	**13**	ND	NS	ND	ND	ND	**4**	ND	**5.5**	**19**	NS	**10**
09/26/02	ND	ND	**4.2**	**21**	ND	**10**	ND	**2.3**	**4.2**	**19**	**180**	**1**
04/28/03	**3.6**	ND	ND	**6**	ND	ND	ND	ND	**2.9**	**16**	**20**	**1**
10/30/03	ND	ND	NT	ND	ND	ND	ND	ND	ND	ND	ND	**1**
04/20/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	**8.8**	**8.9**	**1**
10/21/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**
04/18/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**
10/13/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**
04/25/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**
10/20/06	**3.8**	ND	ND	ND	ND	ND	ND	ND	**1.5**	ND	**5.2**	**1**
04/25/07	ND	ND	ND	ND	ND	**2.2**	ND	ND	ND	ND	ND	**1**
10/31/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**
04/23/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1.6**	**1**
10/20/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**
04/22/09	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	**1**
10/26/09	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	**1**
04/22/10	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	**1**
10/27/10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**
N_i	22	21	16	20	20	20	18	18	19	20	16	
sum of rank values (R_i)	2623.5	2015.0	1491.0	1963.0	1819.0	2030.5	1845.0	1848.5	2153.5	2424.0	1942.0	
avg rank value (Rbar)	119.3	96.0	93.2	98.2	91.0	101.5	102.5	102.7	113.3	121.2	121.4	

	Number of each rank value											Rank Value
rank value of NDs =	15	19	15	18	19	17	15	15	14	14	11	86.5
rank value of 1.1s =	1	0	0	0	0	0	0	0	0	0	0	173
rank value of 1.2s =	0	0	0	0	0	1	0	0	0	0	0	174
rank value of 1.3s =	0	0	0	0	1	0	1	0	0	0	0	175.5
rank value of 1.5s =	0	0	0	0	0	0	0	0	1	0	0	177
rank value of 1.6s =	1	0	0	0	0	0	0	0	0	0	1	178.5
rank value of 1.7s =	0	0	0	0	0	0	1	0	0	0	0	180
rank value of 1.8s =	0	0	0	0	0	0	0	1	0	0	0	181
rank value of 2s =	1	1	0	0	0	0	0	0	0	0	0	182.5
rank value of 2.1s =	0	0	0	0	0	0	0	1	0	0	0	184
rank value of 2.2s =	0	0	0	0	0	1	0	0	0	0	0	185

rank value of 2.3s =	0	0	0	0	0	0	0	1	0	0	0	186
rank value of 2.7s =	0	0	0	0	0	0	0	0	1	0	0	187
rank value of 2.9s =	0	0	0	0	0	0	0	0	1	0	0	188
rank value of 3.2s =	0	1	0	0	0	0	0	0	0	0	0	189
rank value of 3.6s =	1	0	0	0	0	0	0	0	0	0	0	190
rank value of 3.8s =	1	0	0	0	0	0	0	0	0	0	0	191
rank value of 4s =	0	0	0	0	0	0	1	0	0	0	0	192
rank value of 4.2s =	0	0	1	0	0	0	0	0	1	0	0	193.5
rank value of 5.2s =	0	0	0	0	0	0	0	0	0	0	1	195
rank value of 5.4s =	0	0	0	0	0	0	0	0	0	1	0	196
rank value of 5.5s =	0	0	0	0	0	0	0	0	1	0	0	197
rank value of 6s =	0	0	0	1	0	0	0	0	0	0	0	198
rank value of 8.8s =	0	0	0	0	0	0	0	0	0	1	0	199
rank value of 8.9s =	0	0	0	0	0	0	0	0	0	0	1	200
rank value of 10s =	0	0	0	0	0	1	0	0	0	0	0	201
rank value of 13s =	1	0	0	0	0	0	0	0	0	0	0	202
rank value of 16s =	0	0	0	0	0	0	0	0	0	1	0	203
rank value of 19s =	0	0	0	0	0	0	0	0	0	3	0	205
rank value of 20s =	0	0	0	0	0	0	0	0	0	0	1	207
rank value of 21s =	0	0	0	1	0	0	0	0	0	0	0	208
rank value of 130s =	1	0	0	0	0	0	0	0	0	0	0	209
rank value of 180s =	0	0	0	0	0	0	0	0	0	0	1	210
n =	**22**	**21**	**16**	**20**	**20**	**20**	**18**	**18**	**19**	**20**	**16**	

Sum of rank value calculations

1297.5	1643.5	1297.5	1557	1643.5	1470.5	1297.5	1297.5	1211	1211	951.5
173	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	174	0	0	0	0	0
0	0	0	0	175.5	0	175.5	0	0	0	0
0	0	0	0	0	0	0	0	177	0	0
178.5	0	0	0	0	0	0	0	0	0	178.5
0	0	0	0	0	0	180	0	0	0	0
0	0	0	0	0	0	0	181	0	0	0
182.5	182.5	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	184	0	0	0
0	0	0	0	0	185	0	0	0	0	0
0	0	0	0	0	0	0	186	0	0	0
0	0	0	0	0	0	0	0	187	0	0
0	0	0	0	0	0	0	0	188	0	0
0	189	0	0	0	0	0	0	0	0	0
190	0	0	0	0	0	0	0	0	0	0

191	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	192	0	0	0	0
0	0	193.5	0	0	0	0	0	193.5	0	0
0	0	0	0	0	0	0	0	0	0	195
0	0	0	0	0	0	0	0	0	196	0
0	0	0	0	0	0	0	0	197	0	0
0	0	0	198	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	199	0
0	0	0	0	0	0	0	0	0	0	200
0	0	0	0	0	201	0	0	0	0	0
202	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	203	0
0	0	0	0	0	0	0	0	0	615	0
0	0	0	0	0	0	0	0	0	0	207
0	0	0	208	0	0	0	0	0	0	0
209	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	210

sum of rank values (R_i)	**2623.5**	**2015**	**1491**	**1963**	**1819**	**2030.5**	**1845**	**1848.5**	**2153.5**	**2424**	**1942**

Compute the Kruskal-Wallis statistic:

$$H = \{[12/N(N+1)] * [\sum_{i=1}^{K} (R_i^2)/N_i]\} -3(N+1)$$

Well =	**Background**	**MW-1A**	**MW-2**	**MW-2D**	**MW-3**	**MW-3D**	**MW-4A**	**MW-8**	**MW-15**
Ri^2/N_i =	636792.7	192668	165438	206147	189113	189831	244082	293789	235710

$N_{i\ bg}$ = 59
N = 210
H = 4.39

Adjust H for ties:

T_i = 5E+06 sum of T1..T4

$H' = H/(1-(T_i/(N^3-N)))$
H' = 9.75
Chi-square = 15.51

Compare the calculated value H' to the tabulated Chi-square value with K-1 = # groups -1 = 17df at the 5% significance level from Table 1 of the IFG. The value is 15.51 which is greater than H' =9.75. Therefore, the null hypothesis of no contamination at the 5% level holds true and significant evidence of contamination does not exist.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J10-1957-20

Compound: **Total Chromium**
NC MCL (mg/l): 50
Method: Kruskal-Wallis
Background: MW-11S, MW-11D, & MW-14

	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MDL
04/24/00	**15**	NS	NS	**18**	**17**	**11**	ND	**26**	**5.4**	**50**	NS	**5**
06/26/00	**22**	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	**5**
07/26/00	**29**	**20**	NS	NS	NS	NS	NS	NS	NS	NS	NS	**5**
09/18/00	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	**10**
04/09/01	**130**	ND	NS	**11**	**8.4**	ND	ND	**20**	**27**	**160**	NS	**5**
09/18/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**5**
10/29/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**5**
01/30/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**5**
02/28/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**10**
04/15/02	**170**	ND	NS	ND	ND	**5.7**	**7**	**10**	**56**	**180**	NS	**5**
09/26/02	**33**	**5.4**	**33**	**510**	ND	**5.2**	ND	**37**	**36**	**230**	**770**	**5**
04/28/03	ND	ND	ND	**89**	ND	ND	ND	ND	ND	**110**	**27**	**5**
10/30/03	**30**	ND	NT	ND	**6.2**	ND	ND	ND	**31**	**4.6**	**140**	**2**
04/20/04	**33**	ND	**2.1**	**45**	**13**	ND	ND	**11**	**3.5**	**190**	**68**	**2**
10/21/04	**21**	ND	**2.8**	**16**	**2**	ND	ND	ND	ND	**120**	**140**	**2**
04/18/05	**49**	**12**	**8.3**	**680**	**2.9**	ND	ND	**3.2**	ND	**210**	**100**	**2**
10/13/05	**52**	ND	**3.7**	**230**	**4.7**	ND	ND	ND	ND	**150**	**88**	**2**
04/25/06	**65**	ND	**16**	ND	ND	ND	ND	ND	**16**	**100**	**93**	**10**
10/20/06	**50**	ND	**11**	**24**	ND	ND	ND	ND	**17**	ND	**27**	**5**
04/25/07	**20**	ND	ND	**16**	ND	**410**	ND	ND	ND	ND	**17**	**10**
10/31/07	**40.9**	ND	**11.9**	**10.9**	**7.8**	ND	ND	ND	**5.1**	**75.5**	**33.7**	**5**
04/23/08	**10.7**	ND	**16.8**	**7.8**	ND	ND	ND	ND	**7.6**	**7.3**	**14.9**	**5**
10/20/08	**38.6**	ND	**29.4**	**12.7**	ND	ND	ND	ND	ND	ND	**6.8**	**5**
04/22/09	**12.3**	ND	**28.9**	**19.7**	**5.1**	ND	ND	ND	**7.3**	ND	NS	**5**
10/26/09	**10**	ND	**8.1**	ND	**18.7**	ND	NS	NS	NS	**10.9**	**8.1**	**5**
04/22/10	**14.3**	**10.9**	**13.1**	ND	ND	ND	NS	NS	ND	ND	ND	**5**
10/27/10	**10.1**	ND	**6.6**	**7.1**	ND	ND	**12**	**9.2**	ND	ND	**5.2**	**5**
N_i	22	21	16	20	20	20	18	18	19	20	16	
sum of rank values (R_i)	3505.0	1332.0	1956.5	2630.5	1666.0	1307.0	1002.5	1496.0	1915.0	2794.0	2550.5	
avg rank value (Rbar)	159.3	63.4	122.3	131.5	83.3	65.4	55.7	83.1	100.8	139.7	159.4	

	Number of each rank value											Rank Value
rank value of NDs =	1	17	2	5	10	16	16	11	8	6	1	47
rank value of 2s =	0	0	0	0	1	0	0	0	0	0	0	94
rank value of 2.1s =	0	0	1	0	0	0	0	0	0	0	0	95
rank value of 2.8s =	0	0	1	0	0	0	0	0	0	0	0	96
rank value of 2.9s =	0	0	0	0	1	0	0	0	0	0	0	97
rank value of 3.2s =	0	0	0	0	0	0	0	1	0	0	0	98
rank value of 3.5s =	0	0	0	0	0	0	0	0	1	0	0	99
rank value of 3.7s =	0	0	1	0	0	0	0	0	0	0	0	100
rank value of 4.6s =	0	0	0	0	0	0	0	0	0	1	0	101
rank value of 4.7s =	0	0	0	0	1	0	0	0	0	0	0	102
rank value of 5.1s =	0	0	0	0	1	0	0	0	1	0	0	103.5
rank value of 5.2s =	0	0	0	0	0	1	0	0	0	0	1	105.5
rank value of 5.4s =	0	1	0	0	0	0	0	0	1	0	0	107.5
rank value of 5.7s =	0	0	0	0	0	1	0	0	0	0	0	109
rank value of 6.2s =	0	0	0	0	1	0	0	0	0	0	0	110
rank value of 6.6s =	0	0	1	0	0	0	0	0	0	0	0	111
rank value of 6.8s =	0	0	0	0	0	0	0	0	0	0	1	112
rank value of 7s =	0	0	0	0	0	0	1	0	0	0	0	113
rank value of 7.1s =	0	0	0	1	0	0	0	0	0	0	0	114
rank value of 7.3s =	0	0	0	0	0	0	0	0	1	1	0	115.5
rank value of 7.6s =	0	0	0	0	0	0	0	0	1	0	0	117
rank value of 7.8s =	0	0	0	1	1	0	0	0	0	0	0	118.5
rank value of 8.1s =	0	0	1	0	0	0	0	0	0	0	1	120.5
rank value of 8.3s =	0	0	1	0	0	0	0	0	0	0	0	122
rank value of 8.4s =	0	0	0	0	1	0	0	0	0	0	0	123
rank value of 9.2s =	0	0	0	0	0	0	0	1	0	0	0	124

rank value of 10s =	1	0	0	0	0	0	0	1	0	0	0	125.5
rank value of 10.1s =	1	0	0	0	0	0	0	0	0	0	0	127
rank value of 10.7s =	1	0	0	0	0	0	0	0	0	0	0	128
rank value of 10.9s =	0	1	0	1	0	0	0	0	0	1	0	130
rank value of 11s =	0	0	1	1	0	1	0	1	0	0	0	133.5
rank value of 11.9s =	0	0	1	0	0	0	0	0	0	0	0	136
rank value of 12s =	0	1	0	0	0	0	1	0	0	0	0	137.5
rank value of 12.3s =	1	0	0	0	0	0	0	0	0	0	0	139
rank value of 12.7s =	0	0	0	1	0	0	0	0	0	0	0	140
rank value of 13s =	0	0	0	0	1	0	0	0	0	0	0	141
rank value of 13.1s =	0	0	1	0	0	0	0	0	0	0	0	142
rank value of 14.3s =	1	0	0	0	0	0	0	0	0	0	0	143
rank value of 14.9s =	0	0	0	0	0	0	0	0	0	0	1	144
rank value of 15s =	1	0	0	0	0	0	0	0	0	0	0	145
rank value of 16s =	0	0	1	2	0	0	0	0	1	0	0	147.5
rank value of 16.8s =	0	0	1	0	0	0	0	0	0	0	0	150
rank value of 17s =	0	0	0	0	1	0	0	0	1	0	1	152
rank value of 18s =	0	0	0	1	0	0	0	0	0	0	0	154
rank value of 18.7s =	0	0	0	0	1	0	0	0	0	0	0	155
rank value of 19.7s =	0	0	0	1	0	0	0	0	0	0	0	156
rank value of 20s =	1	1	0	0	0	0	0	1	0	0	0	158
rank value of 21s =	1	0	0	0	0	0	0	0	0	0	0	160
rank value of 22s =	1	0	0	0	0	0	0	0	0	0	0	161
rank value of 24s =	0	0	0	1	0	0	0	0	0	0	0	162
rank value of 26s =	0	0	0	0	0	0	0	1	0	0	0	163
rank value of 27s =	0	0	0	0	0	0	0	0	1	0	2	165
rank value of 28.9s =	0	0	1	0	0	0	0	0	0	0	0	167
rank value of 29s =	1	0	0	0	0	0	0	0	0	0	0	168
rank value of 29.4s =	0	0	1	0	0	0	0	0	0	0	0	169
rank value of 30s =	1	0	0	0	0	0	0	0	0	0	0	170
rank value of 31s =	0	0	0	0	0	0	0	0	1	0	0	171
rank value of 33s =	2	0	1	0	0	0	0	0	0	0	0	173
rank value of 33.7s =	0	0	0	0	0	0	0	0	0	0	1	175
rank value of 36s =	0	0	0	0	0	0	0	0	1	0	0	176
rank value of 37s =	0	0	0	0	0	0	0	1	0	0	0	177
rank value of 38.6s =	1	0	0	0	0	0	0	0	0	0	0	178
rank value of 40.9s =	1	0	0	0	0	0	0	0	0	0	0	179
rank value of 45s =	0	0	0	1	0	0	0	0	0	0	0	180
rank value of 49s =	1	0	0	0	0	0	0	0	0	0	0	181
rank value of 50s =	1	0	0	0	0	0	0	0	0	1	0	182.5
rank value of 52s =	1	0	0	0	0	0	0	0	0	0	0	184
rank value of 56s =	0	0	0	0	0	0	0	0	1	0	0	185
rank value of 65s =	1	0	0	0	0	0	0	0	0	0	0	186
rank value of 68s =	0	0	0	0	0	0	0	0	0	0	1	187
rank value of 75.5s =	0	0	0	0	0	0	0	0	0	1	0	188
rank value of 88s =	0	0	0	0	0	0	0	0	0	0	1	189
rank value of 89s =	0	0	0	1	0	0	0	0	0	0	0	190
rank value of 93s =	0	0	0	0	0	0	0	0	0	0	1	191
rank value of 100s =	0	0	0	0	0	0	0	0	0	1	1	192.5
rank value of 110s =	0	0	0	0	0	0	0	0	0	1	0	194
rank value of 120s =	0	0	0	0	0	0	0	0	0	1	0	195
rank value of 130s =	1	0	0	0	0	0	0	0	0	0	0	196
rank value of 140s =	0	0	0	0	0	0	0	0	0	0	2	197.5
rank value of 150s =	0	0	0	0	0	0	0	0	0	1	0	199
rank value of 160s =	0	0	0	0	0	0	0	0	0	1	0	200
rank value of 170s =	1	0	0	0	0	0	0	0	0	0	0	201
rank value of 180s =	0	0	0	0	0	0	0	0	0	1	0	202
rank value of 190s =	0	0	0	0	0	0	0	0	0	1	0	203
rank value of 210s =	0	0	0	0	0	0	0	0	0	1	0	204
rank value of 230s =	0	0	0	1	0	0	0	0	0	1	0	205.5
rank value of 410s =	0	0	0	0	0	1	0	0	0	0	0	207
rank value of 510s =	0	0	0	1	0	0	0	0	0	0	0	208
rank value of 680s =	0	0	0	1	0	0	0	0	0	0	0	209
rank value of 770s =	0	0	0	0	0	0	0	0	0	0	1	210
n =	**22**	**21**	**16**	**20**	**20**	**20**	**18**	**18**	**19**	**20**	**16**	

Sum of rank value calculations

47	799	94	235	470	752	752	517	376	282	47
0	0	0	0	94	0	0	0	0	0	0

0	0	95	0	0	0	0	0	0	0	0
0	0	96	0	0	0	0	0	0	0	0
0	0	0	0	97	0	0	0	0	0	0
0	0	0	0	0	0	0	98	0	0	0
0	0	0	0	0	0	0	0	99	0	0
0	0	100	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	101	0
0	0	0	0	102	0	0	0	0	0	0
0	0	0	0	103.5	0	0	0	103.5	0	0
0	0	0	0	0	105.5	0	0	0	0	105.5
0	107.5	0	0	0	0	0	0	107.5	0	0
0	0	0	0	0	109	0	0	0	0	0
0	0	0	0	110	0	0	0	0	0	0
0	0	111	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	112
0	0	0	0	0	0	113	0	0	0	0
0	0	0	114	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	115.5	115.5	0
0	0	0	0	0	0	0	0	117	0	0
0	0	0	118.5	118.5	0	0	0	0	0	0
0	0	120.5	0	0	0	0	0	0	0	120.5
0	0	122	0	0	0	0	0	0	0	0
0	0	0	0	123	0	0	0	0	0	0
0	0	0	0	0	0	0	124	0	0	0
125.5	0	0	0	0	0	0	125.5	0	0	0
127	0	0	0	0	0	0	0	0	0	0
128	0	0	0	0	0	0	0	0	0	0
0	130	0	130	0	0	0	0	0	130	0
0	0	133.5	133.5	0	133.5	0	133.5	0	0	0
0	0	136	0	0	0	0	0	0	0	0
0	137.5	0	0	0	0	137.5	0	0	0	0
139	0	0	0	0	0	0	0	0	0	0
0	0	0	140	0	0	0	0	0	0	0
0	0	0	0	141	0	0	0	0	0	0
0	0	142	0	0	0	0	0	0	0	0
143	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	144
145	0	0	0	0	0	0	0	0	0	0
0	0	147.5	295	0	0	0	0	147.5	0	0
0	0	150	0	0	0	0	0	0	0	0
0	0	0	0	152	0	0	0	152	0	152
0	0	0	154	0	0	0	0	0	0	0
0	0	0	0	155	0	0	0	0	0	0
0	0	0	156	0	0	0	0	0	0	0
158	158	0	0	0	0	0	158	0	0	0
160	0	0	0	0	0	0	0	0	0	0
161	0	0	0	0	0	0	0	0	0	0
0	0	0	162	0	0	0	0	0	0	0
0	0	0	0	0	0	0	163	0	0	0
0	0	0	0	0	0	0	0	165	0	330
0	0	167	0	0	0	0	0	0	0	0
168	0	0	0	0	0	0	0	0	0	0
0	0	169	0	0	0	0	0	0	0	0
170	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	171	0	0
346	0	173	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	175
0	0	0	0	0	0	0	0	176	0	0
0	0	0	0	0	0	0	177	0	0	0
178	0	0	0	0	0	0	0	0	0	0
179	0	0	0	0	0	0	0	0	0	0
0	0	0	180	0	0	0	0	0	0	0
181	0	0	0	0	0	0	0	0	0	0
182.5	0	0	0	0	0	0	0	0	182.5	0
184	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	185	0	0
186	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	187
0	0	0	0	0	0	0	0	0	188	0
0	0	0	0	0	0	0	0	0	0	189
0	0	0	190	0	0	0	0	0	0	0

	0	0	0	0	0	0	0	0	0	0	191
	0	0	0	0	0	0	0	0	0	192.5	192.5
	0	0	0	0	0	0	0	0	0	194	0
	0	0	0	0	0	0	0	0	0	195	0
	196	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	395
	0	0	0	0	0	0	0	0	0	199	0
	0	0	0	0	0	0	0	0	0	200	0
	201	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	202	0
	0	0	0	0	0	0	0	0	0	203	0
	0	0	0	0	0	0	0	0	0	204	0
	0	0	0	205.5	0	0	0	0	0	205.5	0
	0	0	0	0	0	207	0	0	0	0	0
	0	0	0	208	0	0	0	0	0	0	0
	0	0	0	209	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	210
sum of rank values (R_i)	**3505**	**1332**	**1956.5**	**2630.5**	**1666**	**1307**	**1002.5**	**1496**	**1915**	**2794**	**2550.5**

Compute the Kruskal-Wallis statistic:

$$H = \{[12/N(N+1)] * [S^{K}_{i=1} (R_i^2)/N_i]\} -3(N+1)$$

Well =	**Background**	**MW-1A**	**MW-2**	**MW-2D**	**MW-3**	**MW-3D**	**MW-4A**	**MW-8**	**MW-15**
Ri^2/N_i =	782231.2	345977	138778	85412	55834	124334	193012	390322	406566

$N_{i\ bg}$ = 59
N = 210
H = 50.13

Adjust H for ties:

T_i = 804576 sum of T1..T4

$H' = H/(1-(T_i/(N^3-N)))$
H' = 54.90
Chi-square = 15.51

Compare the calculated value H' to the tabulated Chi-square value with K-1 = # groups -1 = 17df at the 5% significance level from Table 1 of the IFG. The value is 15.51 which is less than H' =54.90.
Therefore, there is evidence of significant differences between the well groups.
Post-hoc pairwise comparisons are necessary (see below).

Calculate the critical values to compare each compliance well to the background wells:

Critical Value (C_x) = $P(N(N+1)/12)^{0.5} * (1/N_{i\ bg}+1/N_x)^{0.5}$
P = 2.33 Percentile of Standard Normal Distribution
from Table 4 of IFG
N = total sample size
$N_{i\ bg}$ = total samples (N_i) of background data
N_x = total samples (N_i) of well x

Difference between average ranks (Dx) = Rbar (well x) - avg Rbar (background)

Well =	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	**MW-15**
Rbar (well x) =	131.5	83.3	65.4	55.7	83.1	100.8	139.7	159.4
avg Rbar (background) =	115.1	115.1	115.1	115.1	115.1	115.1	115.1	115.1
Dx =	16.4	-31.8	-49.8	-59.4	-32.0	-14.4	24.6	44.3
Cx =	36.6	36.6	36.6	38.1	38.1	37.3	36.6	39.9
Statistical Significance ?	No	No	No	No	No	No	No	**Yes**
If SSI, is current event above MCL?	-	-	-	-	-	-	-	No

Compare each difference (Dx) with the corresponding critical value (Cx).
The Dx value for the above indicated wells do exceed the corresponding Cx value.
Therefore, we conclude that the concentration of Total Chromium averaged over these compliance wells are significantly greater than that of the background wells.
Shewart-CUSUM Control Charts should be performed for each failing well to check for statistical significance.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J10-1957-20

Compound: **Total Chromium**
NC MCL (mg/l): 50
Method: Shewhart-CUSUM Control Chart

Part 1: Check for Normality

	MW-15	MDL
9/26/2002	**770**	**5**
4/28/2003	**27**	**5**
10/30/2003	**140**	**2**
4/20/2004	**68**	**2**
10/21/2004	**140**	**2**
4/18/2005	**100**	**2**
10/13/2005	**88**	**2**
4/25/2006	**93**	**10**
10/20/2006	**27**	**5**
4/25/2007	**17**	**10**
10/31/2007	**33.7**	**5**
4/23/2008	**14.9**	**5**
10/20/2008	**6.8**	**5**
4/22/2009	NS	**5**
10/26/2009	**8.1**	**5**
4/22/2010	ND	**5**
10/27/2010	**5.2**	**5**

If not detected (ND), use half of the detection limit.

	X_i values =
770	305739318
27	-333172.9
140	83310.308
68	-22725.31
140	83310.308
100	49.633172
88	-576.9693
93	-36.75995
27	-333172.9
17	-499149
33.7	-245608.4
14.9	-539850.2
6.8	-717518.3
8.1	-686712.6
2.5	-825953.7
5.2	-756680.6

X_{bar} = 96.325
SD = 185.81546
N = 16
$1/NS_i(X_i-X_{bar})^3$ = 18809052
g_1 = 3.2297172

Since the Coefficient of Skewness of 3.23 is greater than 1.0, the real data appear to be significantly skewed.
Do not assume that the data follow a Normal distribution.
Perform the Skewness Test on the natural log of the values.

ln =	X_i values =
6.6463905	30.081095
3.2958369	-0.013915
4.9416424	2.7751737
4.2195077	0.3188177
4.9416424	2.7751737
4.6051702	1.2209584
4.4773368	0.8331741
4.5325995	0.9887587
3.2958369	-0.013915
2.8332133	-0.347647
3.5174978	-6.71E-06
2.7013612	-0.582182
1.9169226	-4.247106
2.0918641	-3.014044
0.9162907	-17.98617
1.6486586	-6.726674

X_{bar} = 3.5363607
SD = 1.4956364
N = 16
$1/NS_i(X_i-X_{bar})^3$ = 0.3788433
g_1 = 0.1247454

Since the Coefficient of Skewness of 0.12 is less than 1.0, the data appear not to be significantly skewed. Proceed with further statistical tests using the log-transformed values shown above.

Part 2: Shewhart-CUSUM Control Chart

Date	MW-15	MDL	Data for Testing
9/26/2002	**770**	5	6.6463905
4/28/2003	**27**	5	3.2958369
10/30/2003	**140**	2	4.9416424
4/20/2004	**68**	2	4.2195077
10/21/2004	**140**	2	4.9416424
4/18/2005	**100**	2	4.6051702
10/13/2005	**88**	2	4.4773368
4/25/2006	**93**	10	4.5325995
10/20/2006	**27**	5	3.2958369
4/25/2007	**17**	10	2.8332133
10/31/2007	**33.7**	5	3.5174978
4/23/2008	**14.9**	5	2.7013612
10/20/2008	**6.8**	5	1.9169226
4/22/2009	NS	5	-
10/26/2009	**8.1**	5	2.0918641
4/22/2010	ND	5	0.9162907
10/27/2010	**5.2**	5	1.6486586

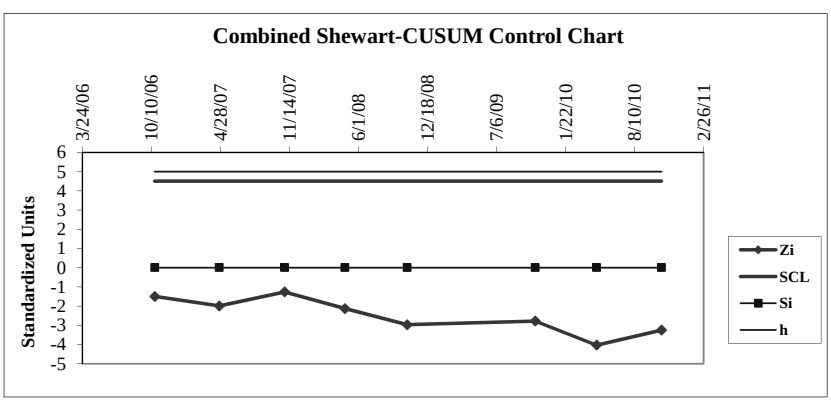
Compute the mean and standard deviation of the historical data:

4.7075158 = x_{mean} (Mean of N1-N8 historical data)
0.9406614 = s (Standard Deviation of N1-N8 historical data)
1 = k (constant, reference value)
5 = h (constant, upper control limit for the CUSUM scheme)
4.5 = SCL (Constant, upper Shewhart Control Limit)

Compute the standardized mean (Z_i) and the cumulative sum (S_i) for each concentration.

Date	x_i	Z_i	S_i	h	SCL
			0		
10/20/2006	3.2958369	-1.5007301	0	5	4.5
4/25/2007	2.8332133	-1.9925367	0	5	4.5
10/31/2007	3.5174978	-1.2650864	0	5	4.5
4/23/2008	2.7013612	-2.1327063	0	5	4.5
10/20/2008	1.9169226	-2.9666286	0	5	4.5
10/26/2009	2.0918641	-2.7806516	0	5	4.5
4/22/2010	0.9162907	-4.0303821	0	5	4.5
10/27/2010	1.6486586	-3.2518152	0	5	4.5

Plot Z_i and S_i versus time:



Compare the Z_i and S_i values to their respective control limits of SCL and h.
The limits were not exceeded and do not indicate statistically significant evidence of contamination at the site.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J10-1957-20

Compound: **Total Cobalt**
NC MCL (mg/l): Not Established
Method: Kruskal-Wallis
Background: MW-11S, MW-11D, & MW-14

	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MDL
04/24/00	ND	NS	NS	ND	**8.2**	**5.4**	ND	**14**	ND	**16**	NS	**5**
06/26/00	**10**	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	**5**
07/26/00	**9.9**	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	**5**
09/18/00	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	**10**
04/09/01	**54**	ND	NS	ND	ND	ND	**13**	**12**	**13**	**59**	NS	**5**
09/18/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**5**
10/29/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**5**
01/30/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**5**
02/28/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**10**
04/15/02	**58**	ND	NS	ND	ND	ND	**18**	**8**	**21**	**82**	NS	**5**
09/26/02	**13**	**5.4**	**16**	**100**	ND	**16**	**7.4**	**21**	**19**	**85**	**560**	**5**
04/28/03	**21**	ND	ND	**37**	ND	ND	**6.9**	ND	**17**	**50**	**81**	**5**
10/30/03	**9**	ND	NT	ND	ND	ND	**5.7**	ND	**52**	**8.8**	**110**	**5**
04/20/04	**9.5**	ND	ND	**7.7**	**5.2**	ND	**13**	**6.4**	ND	**43**	**50**	**5**
10/21/04	**6.2**	ND	ND	ND	ND	ND	ND	ND	ND	**31**	**120**	**5**
04/18/05	**12**	ND	ND	**110**	ND	ND	ND	ND	ND	**36**	**70**	**5**
10/13/05	**21**	ND	ND	**32**	ND	ND	**5.1**	ND	ND	**29**	**56**	**5**
04/25/06	**16**	ND	ND	ND	ND	ND	ND	ND	ND	**25**	**57**	**10**
10/20/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
04/25/07	ND	ND	ND	ND	ND	**260**	ND	ND	ND	ND	ND	**10**
10/31/07	**16.8**	ND	ND	ND	**10.6**	ND	ND	ND	ND	ND	**17.6**	**5**
04/23/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**22.3**	**5**
10/20/08	**27**	**10.4**	**19.5**	**9.4**	**7.7**	ND	**12.6**	**5.3**	**7.1**	ND	**18.4**	**5**
04/22/09	**5**	**6.3**	**17.1**	**8.5**	**5.7**	ND	**7**	ND	**6.4**	ND	NS	**5**
10/26/09	ND	ND	ND	ND	**6**	ND	NS	NS	NS	ND	**6**	**5**
04/22/10	**5.6**	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	**5**
10/27/10	ND	ND	ND	ND	ND	ND	**17.3**	**5.6**	ND	ND	**7.8**	**5**
N_i	22	21	16	20	20	20	18	18	19	20	16	
sum of rank values (R_i)	2992.0	1549.5	1333.0	2052.5	1723.0	1569.5	2024.5	1742.0	1922.5	2624.5	2622.0	
avg rank value (Rbar)	136.0	73.8	83.3	102.6	86.2	78.5	112.5	96.8	101.2	131.2	163.9	

	Number of each rank value											Rank Value
rank value of NDs =	6	18	13	13	14	17	8	11	12	9	3	62.5
rank value of 5s =	1	0	0	0	0	0	0	0	0	0	0	125
rank value of 5.1s =	0	0	0	0	0	0	1	0	0	0	0	126
rank value of 5.2s =	0	0	0	0	1	0	0	0	0	0	0	127
rank value of 5.3s =	0	0	0	0	0	0	0	1	0	0	0	128
rank value of 5.4s =	0	1	0	0	0	1	0	0	0	0	0	129.5
rank value of 5.6s =	1	0	0	0	0	0	0	1	0	0	0	131.5
rank value of 5.7s =	0	0	0	0	1	0	1	0	0	0	0	133.5
rank value of 6s =	0	0	0	0	1	0	0	0	0	0	1	135.5
rank value of 6.2s =	1	0	0	0	0	0	0	0	0	0	0	137
rank value of 6.3s =	0	1	0	0	0	0	0	0	0	0	0	138
rank value of 6.4s =	0	0	0	0	0	0	0	1	1	0	0	139.5
rank value of 6.9s =	0	0	0	0	0	0	1	0	0	0	0	141
rank value of 7s =	0	0	0	0	0	0	1	0	0	0	0	142
rank value of 7.1s =	0	0	0	0	0	0	0	0	1	0	0	143
rank value of 7.4s =	0	0	0	0	0	0	1	0	0	0	0	144
rank value of 7.7s =	0	0	0	1	1	0	0	0	0	0	0	145.5
rank value of 7.8s =	0	0	0	0	0	0	0	0	0	0	1	147
rank value of 8.2s =	0	0	0	0	1	0	0	1	0	0	0	148.5
rank value of 8.5s =	0	0	0	1	0	0	0	0	0	0	0	150
rank value of 8.8s =	0	0	0	0	0	0	0	0	0	1	0	151
rank value of 9s =	1	0	0	0	0	0	0	0	0	0	0	152
rank value of 9.4s =	0	0	0	1	0	0	0	0	0	0	0	153
rank value of 9.5s =	1	0	0	0	0	0	0	0	0	0	0	154
rank value of 9.9s =	1	0	0	0	0	0	0	0	0	0	0	155
rank value of 10s =	1	0	0	0	0	0	0	0	0	0	0	156
rank value of 10.4s =	0	1	0	0	0	0	0	0	0	0	0	157
rank value of 10.6s =	0	0	0	0	1	0	0	0	0	0	0	158

rank value of 12s =	1	0	0	0	0	0	0	1	0	0	0	159.5
rank value of 12.6s =	0	0	0	0	0	0	1	0	0	0	0	161
rank value of 13s =	1	0	0	0	0	0	2	0	1	0	0	163.5
rank value of 14s =	0	0	0	0	0	0	0	1	0	0	0	166
rank value of 16s =	1	0	1	0	0	1	0	0	0	1	0	168.5
rank value of 16.8s =	1	0	0	0	0	0	0	0	0	0	0	171
rank value of 17s =	0	0	0	0	0	0	0	0	1	0	0	172
rank value of 17.1s =	0	0	1	0	0	0	0	0	0	0	0	173
rank value of 17.3s =	0	0	0	0	0	0	1	0	0	0	0	174
rank value of 17.6s =	0	0	0	0	0	0	0	0	0	0	1	175
rank value of 18s =	0	0	0	0	0	0	1	0	0	0	0	176
rank value of 18.4s =	0	0	0	0	0	0	0	0	0	0	1	177
rank value of 19s =	0	0	0	0	0	0	0	0	1	0	0	178
rank value of 19.5s =	0	0	1	0	0	0	0	0	0	0	0	179
rank value of 21s =	2	0	0	0	0	0	0	1	1	0	0	181.5
rank value of 22.3s =	0	0	0	0	0	0	0	0	0	0	1	184
rank value of 25s =	0	0	0	0	0	0	0	0	0	1	0	185
rank value of 27s =	1	0	0	0	0	0	0	0	0	0	0	186
rank value of 29s =	0	0	0	0	0	0	0	0	0	1	0	187
rank value of 31s =	0	0	0	0	0	0	0	0	0	1	0	188
rank value of 32s =	0	0	0	1	0	0	0	0	0	0	0	189
rank value of 36s =	0	0	0	0	0	0	0	0	0	1	0	190
rank value of 37s =	0	0	0	1	0	0	0	0	0	0	0	191
rank value of 43s =	0	0	0	0	0	0	0	0	0	1	0	192
rank value of 50s =	0	0	0	0	0	0	0	0	0	1	1	193.5
rank value of 52s =	0	0	0	0	0	0	0	0	1	0	0	195
rank value of 54s =	1	0	0	0	0	0	0	0	0	0	0	196
rank value of 56s =	0	0	0	0	0	0	0	0	0	0	1	197
rank value of 57s =	0	0	0	0	0	0	0	0	0	0	1	198
rank value of 58s =	1	0	0	0	0	0	0	0	0	0	0	199
rank value of 59s =	0	0	0	0	0	0	0	0	0	1	0	200
rank value of 70s =	0	0	0	0	0	0	0	0	0	0	1	201
rank value of 81s =	0	0	0	0	0	0	0	0	0	0	1	202
rank value of 82s =	0	0	0	0	0	0	0	0	0	1	0	203
rank value of 85s =	0	0	0	0	0	0	0	0	0	1	0	204
rank value of 100s =	0	0	0	1	0	0	0	0	0	0	0	205
rank value of 110s =	0	0	0	1	0	0	0	0	0	0	1	206.5
rank value of 120s =	0	0	0	0	0	0	0	0	0	0	1	208
rank value of 260s =	0	0	0	0	0	1	0	0	0	0	0	209
rank value of 560s =	0	0	0	0	0	0	0	0	0	0	1	210
n =	**22**	**21**	**16**	**20**	**20**	**20**	**18**	**18**	**19**	**20**	**16**	

Sum of rank value calculations

375	1125	812.5	812.5	875	1062.5	500	687.5	750	562.5	187.5
125	0	0	0	0	0	0	0	0	0	0

0	0	0	0	0	0	126	0	0	0	0
0	0	0	0	127	0	0	0	0	0	0
0	0	0	0	0	0	0	128	0	0	0
0	129.5	0	0	0	129.5	0	0	0	0	0
131.5	0	0	0	0	0	0	131.5	0	0	0
0	0	0	0	133.5	0	133.5	0	0	0	0
0	0	0	0	135.5	0	0	0	0	0	135.5
137	0	0	0	0	0	0	0	0	0	0
0	138	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	139.5	139.5	0	0
0	0	0	0	0	0	141	0	0	0	0
0	0	0	0	0	0	142	0	0	0	0
0	0	0	0	0	0	0	0	143	0	0
0	0	0	0	0	0	144	0	0	0	0
0	0	0	145.5	145.5	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	147
0	0	0	0	148.5	0	0	148.5	0	0	0
0	0	0	150	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	151	0
152	0	0	0	0	0	0	0	0	0	0
0	0	0	153	0	0	0	0	0	0	0
154	0	0	0	0	0	0	0	0	0	0
155	0	0	0	0	0	0	0	0	0	0
156	0	0	0	0	0	0	0	0	0	0
0	157	0	0	0	0	0	0	0	0	0
0	0	0	0	158	0	0	0	0	0	0
159.5	0	0	0	0	0	0	159.5	0	0	0
0	0	0	0	0	0	161	0	0	0	0
163.5	0	0	0	0	0	327	0	163.5	0	0
0	0	0	0	0	0	0	166	0	0	0
168.5	0	168.5	0	0	168.5	0	0	0	168.5	0
171	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	172	0	0
0	0	173	0	0	0	0	0	0	0	0
0	0	0	0	0	0	174	0	0	0	0
0	0	0	0	0	0	0	0	0	0	175
0	0	0	0	0	0	176	0	0	0	0
0	0	0	0	0	0	0	0	0	0	177
0	0	0	0	0	0	0	0	178	0	0
0	0	179	0	0	0	0	0	0	0	0
363	0	0	0	0	0	0	181.5	181.5	0	0
0	0	0	0	0	0	0	0	0	0	184
0	0	0	0	0	0	0	0	0	185	0
186	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	187	0
0	0	0	0	0	0	0	0	0	188	0
0	0	0	189	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	190	0
0	0	0	191	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	192	0
0	0	0	0	0	0	0	0	0	193.5	193.5
0	0	0	0	0	0	0	0	195	0	0
196	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	197
0	0	0	0	0	0	0	0	0	0	198
199	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	200	0
0	0	0	0	0	0	0	0	0	0	201
0	0	0	0	0	0	0	0	0	0	202
0	0	0	0	0	0	0	0	0	203	0
0	0	0	0	0	0	0	0	0	204	0
0	0	0	205	0	0	0	0	0	0	0
0	0	0	206.5	0	0	0	0	0	0	206.5
0	0	0	0	0	0	0	0	0	0	208
0	0	0	0	0	209	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	210

sum of rank values (R_i)	**2992**	**1549.5**	**1333**	**2052.5**	**1723**	**1569.5**	**2024.5**	**1742**	**1922.5**	**2624.5**	**2622**

Compute the Kruskal-Wallis statistic:

$$H = \{[12/N(N+1)] * [S^{K}_{i=1} (R_i^2)/N_i]\} -3(N+1)$$

Well =	**Background**	**MW-1A**	**MW-2**	**MW-2D**	**MW-3**	**MW-3D**	**MW-4A**	**MW-8**	**MW-15**
Ri^2/N_i =	584911.0	210638	148436	123167	227700	168587	194527	344400	429680

$N_{i\ bg}$ = 59
N = 210
H = 25.64

Adjust H for ties:

T_i = 2E+06 sum of T1..T6

$H' = H/(1-(T_i/(N^3-N)))$
H' = 32.29
Chi-square = 15.51

Compare the calculated value H' to the tabulated Chi-square value with K-1 = # groups -1 = 17df at the 5% significance level from Table 1 of the IFG. The value is 15.51 which is less than H' =32.29.
Therefore, there is evidence of significant differences between the well groups.
Post-hoc pairwise comparisons are necessary (see below).

Calculate the critical values to compare each compliance well to the background wells:

Critical Value (C_x) = $P(N(N+1)/12)^{0.5} * (1/N_{i\ bg}+1/N_x)^{0.5}$
P = 2.33 Percentile of Standard Normal Distribution
from Table 4 of IFG
N = total sample size
$N_{i\ bg}$ = total samples (N_i) of background data
N_x = total samples (N_i) of well x

Difference between average ranks (Dx) = Rbar (well x) - avg Rbar (background)

Well =	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	**MW-15**
Rbar (well x) =	102.6	86.2	78.5	112.5	96.8	101.2	131.2	163.9
avg Rbar (background) =	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.6
Dx =	3.1	-13.4	-21.1	12.9	-2.8	1.6	31.7	64.3
Cx =	36.6	36.6	36.6	38.1	38.1	37.3	36.6	39.9
Statistical Significance ?	No	No	No	No	No	No	No	**Yes**
If SSI, is current event above MCL?	-	-	-	-	-	-	-	NE

Compare each difference (Dx) with the corresponding critical value (Cx).
The Dx value for the above indicated wells do exceed the corresponding Cx value.
Therefore, we conclude that the concentration of Total Cobalt averaged over these compliance wells are significantly greater than that of the background wells.
Shewart-CUSUM Control Charts should be performed for each failing well to check for statistical significance.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J10-1957-20

Compound: **Total Cobalt**
NC MCL (mg/l): Not Established
Method: Shewhart-CUSUM Control Chart

Part 1: Check for Normality

	MW-15	MDL
9/26/2002	**560**	**5**
4/28/2003	**81**	**5**
10/30/2003	**110**	**5**
4/20/2004	**50**	**5**
10/21/2004	**120**	**5**
4/18/2005	**70**	**5**
10/13/2005	**56**	**5**
4/25/2006	**57**	**10**
10/20/2006	ND	**5**
4/25/2007	ND	**10**
10/31/2007	**17.6**	**5**
4/23/2008	**22.3**	**5**
10/20/2008	**18.4**	**5**
4/22/2009	NS	**5**
10/26/2009	**6**	**5**
4/22/2010	ND	**5**
10/27/2010	**7.8**	**5**

If not detected (ND), use half of the detection limit.

	X_i values =
560	114698279
81	324.06575
110	46147.558
50	-14052.04
120	96505.2
70	-70.50898
56	-5960.507
57	-5027.675
2.5	-367542.5
5	-330387.2
17.6	-180661.6
22.3	-139243.5
18.4	-173099.7
6	-316256.2
2.5	-367542.5
7.8	-291846.5

X_{bar} = 74.13125
SD = 135.10462
N = 16
$1/NS_i(X_i-X_{bar})^3$ = 7040597.8
g_1 = 3.1451548

Since the Coefficient of Skewness of 3.15 is greater than 1.0, the real data appear to be significantly skewed.
Do not assume that the data follow a Normal distribution.
Perform the Skewness Test on the natural log of the values.

ln =	X_i values =
6.3279368	28.08575
4.3944492	1.3536258
4.7004804	2.8165379
3.912023	0.2427042
4.7874917	3.3698767
4.2484952	0.8854111
4.0253517	0.4004794
4.0430513	0.4300272
0.9162907	-13.34511
1.6094379	-4.73159
2.8678989	-0.074275
3.1045867	-0.006195
2.9123507	-0.053115
1.7917595	-3.351374
0.9162907	-13.34511
2.0541237	-1.879663

X_{bar} = 3.2882511
SD = 1.5343787
N = 16
$1/NS_i(X_i-X_{bar})^3$ = 0.0498732
g_1 = 0.0152094

Since the Coefficient of Skewness of 0.02 is less than 1.0, the data appear not to be significantly skewed. Proceed with further statistical tests using the log-transformed values shown above.

Part 2: Shewhart-CUSUM Control Chart

Date	MW-15	MDL	Data for Testing
9/26/2002	**560**	5	6.3279368
4/28/2003	**81**	5	4.3944492
10/30/2003	**110**	5	4.7004804
4/20/2004	**50**	5	3.912023
10/21/2004	**120**	5	4.7874917
4/18/2005	**70**	5	4.2484952
10/13/2005	**56**	5	4.0253517
4/25/2006	**57**	10	4.0430513
10/20/2006	ND	5	0.9162907
4/25/2007	ND	10	1.6094379
10/31/2007	**17.6**	5	2.8678989
4/23/2008	**22.3**	5	3.1045867
10/20/2008	**18.4**	5	2.9123507
4/22/2009	NS	5	-
10/26/2009	**6**	5	1.7917595
4/22/2010	ND	5	0.9162907
10/27/2010	**7.8**	5	2.0541237

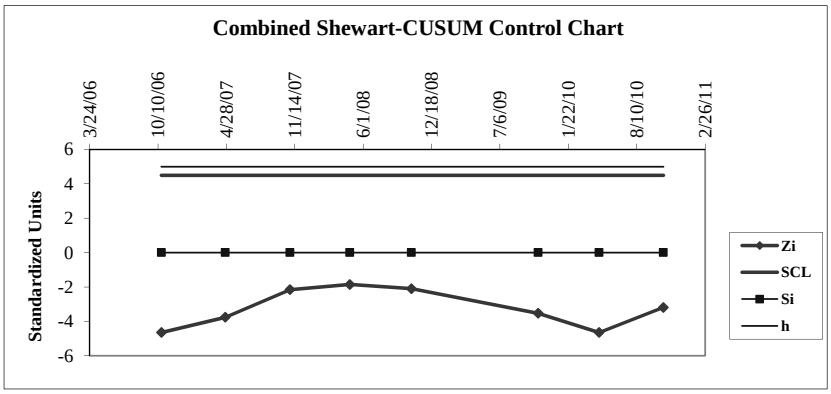
Compute the mean and standard deviation of the historical data:

4.5549099 = x_{mean} (Mean of N1-N8 historical data)
0.7832425 = s (Standard Deviation of N1-N8 historical data)
1 = k (constant, reference value)
5 = h (constant, upper control limit for the CUSUM scheme)
4.5 = SCL (Constant, upper Shewhart Control Limit)

Compute the standardized mean (Z_i) and the cumulative sum (S_i) for each concentration.

Date	x_i	Z_i	S_i	h	SCL
			0		
10/20/2006	0.9162907	-4.6455844	0	5	4.5
4/25/2007	1.6094379	-3.7606131	0	5	4.5
10/31/2007	2.8678989	-2.1538808	0	5	4.5
4/23/2008	3.1045867	-1.8516912	0	5	4.5
10/20/2008	2.9123507	-2.0971273	0	5	4.5
10/26/2009	1.7917595	-3.5278352	0	5	4.5
4/22/2010	0.9162907	-4.6455844	0	5	4.5
10/27/2010	2.0541237	-3.1928632	0	5	4.5

Plot Z_i and S_i versus time:



Compare the Z_i and S_i values to their respective control limits of SCL and h.
The limits were not exceeded and do not indicate statistically significant evidence of contamination at the site.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J10-1957-20

Compound: **Total Copper**
NC MCL (mg/l): 1000
Method: Kruskal-Wallis
Background: MW-11S, MW-11D, & MW-14

	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MDL
04/24/00	**12**	NS	NS	ND	ND	**13**	ND	**27**	ND	**22**	NS	**5**
06/26/00	**17**	**6**	NS	NS	NS	NS	NS	NS	NS	NS	NS	**5**
07/26/00	**12**	**6.1**	NS	NS	NS	NS	NS	NS	NS	NS	NS	**5**
09/18/00	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	**200**
04/09/01	**77**	**8.4**	NS	ND	ND	**5.4**	ND	**26**	**38**	**110**	NS	**5**
09/18/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**5**
10/29/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**5**
01/30/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**5**
02/28/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**200**
04/15/02	**69**	ND	NS	ND	ND	ND	ND	**13**	**68**	**120**	NS	**2**
09/26/02	**20**	**10**	**31**	**220**	ND	ND	**2.6**	**42**	**88**	**150**	**450**	**2**
04/28/03	**24**	ND	**2.6**	**40**	ND	ND	ND	ND	**28**	**94**	**71**	**2**
10/30/03	**18**	ND	NT	ND	**2.3**	**2.6**	ND	**3**	**85**	**4.4**	**150**	**2**
04/20/04	**18**	ND	**2.8**	**12**	**5.3**	**2.3**	**4.3**	**13**	**7.4**	**100**	**89**	**2**
10/21/04	**11**	ND	ND	**2**	ND	ND	ND	ND	ND	**63**	**140**	**2**
04/18/05	**29**	ND	ND	**240**	ND	ND	ND	**3.8**	ND	**120**	**130**	**2**
10/13/05	**31**	**2.6**	**3.5**	**70**	ND	ND	ND	ND	**3**	**82**	**96**	**2**
04/25/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**200**
10/20/06	**26**	ND	ND	**9.6**	ND	ND	ND	ND	**20**	ND	**25**	**5**
04/25/07	**15**	ND	ND	ND	ND	**330**	ND	ND	ND	ND	**26**	**10**
10/31/07	**29.2**	ND	ND	ND	ND	ND	ND	ND	**6.3**	**40.3**	**47.4**	**5**
04/23/08	**7.2**	ND	ND	ND	ND	ND	ND	ND	**7.2**	ND	**17**	**5**
10/20/08	**26.5**	ND	**8.3**	ND	ND	ND	ND	ND	ND	ND	**9.7**	**5**
04/22/09	**5.1**	ND	**22.6**	**6**	ND	ND	ND	ND	**8.8**	ND	NS	**5**
10/26/09	**5.8**	ND	ND	ND	**6.4**	ND	NS	NS	NS	ND	**7.1**	**5**
04/22/10	**9.9**	ND	ND	ND	ND	**5.9**	NS	NS	ND	ND	ND	**5**
10/27/10	**6.7**	ND	ND	ND	ND	ND	ND	**12.4**	ND	ND	**53.9**	**5**
N_i	22	21	16	20	20	20	18	18	19	20	16	
sum of rank values (R_i)	3458.0	1618.0	1442.0	2036.5	1373.5	1683.0	1176.5	1834.5	2259.5	2585.5	2688.0	
avg rank value (Rbar)	157.2	77.0	90.1	101.8	68.7	84.2	65.4	101.9	118.9	129.3	168.0	

	Number of each rank value											Rank Value
rank value of NDs =	1	16	10	12	17	14	16	10	8	9	2	58
rank value of 2s =	0	0	0	1	0	0	0	0	0	0	0	116
rank value of 2.3s =	0	0	0	0	1	1	0	0	0	0	0	117.5
rank value of 2.6s =	0	1	1	0	0	1	1	0	0	0	0	120.5
rank value of 2.8s =	0	0	1	0	0	0	0	0	0	0	0	123
rank value of 3s =	0	0	0	0	0	0	0	1	1	0	0	124.5
rank value of 3.5s =	0	0	1	0	0	0	0	0	0	0	0	126
rank value of 3.8s =	0	0	0	0	0	0	0	1	0	0	0	127
rank value of 4.3s =	0	0	0	0	0	0	1	0	0	0	0	128
rank value of 4.4s =	0	0	0	0	0	0	0	0	0	1	0	129
rank value of 5.1s =	1	0	0	0	0	0	0	0	0	0	0	130
rank value of 5.3s =	0	0	0	0	1	0	0	0	0	0	0	131
rank value of 5.4s =	0	0	0	0	0	1	0	0	0	0	0	132
rank value of 5.8s =	1	0	0	0	0	0	0	0	0	0	0	133
rank value of 5.9s =	0	0	0	0	0	1	0	0	0	0	0	134
rank value of 6s =	0	1	0	1	0	0	0	0	0	0	0	135.5
rank value of 6.1s =	0	1	0	0	0	0	0	0	0	0	0	137
rank value of 6.3s =	0	0	0	0	0	0	0	0	1	0	0	138
rank value of 6.4s =	0	0	0	0	1	0	0	0	0	0	0	139
rank value of 6.7s =	1	0	0	0	0	0	0	0	0	0	0	140
rank value of 7.1s =	0	0	0	0	0	0	0	0	0	0	1	141
rank value of 7.2s =	1	0	0	0	0	0	0	0	1	0	0	142.5
rank value of 7.4s =	0	0	0	0	0	0	0	0	1	0	0	144
rank value of 8.3s =	0	0	1	0	0	0	0	0	0	0	0	145
rank value of 8.4s =	0	1	0	0	0	0	0	0	0	0	0	146
rank value of 8.8s =	0	0	0	0	0	0	0	0	1	0	0	147
rank value of 9.6s =	0	0	0	1	0	0	0	0	0	0	0	148
rank value of 9.7s =	0	0	0	0	0	0	0	0	0	0	1	149
rank value of 9.9s =	1	0	0	0	0	0	0	0	0	0	0	150

rank value of 10s =	0	1	0	0	0	0	0	0	0	0	0	151
rank value of 11s =	1	0	0	0	0	0	0	0	0	0	0	152
rank value of 12s =	2	0	0	1	0	0	0	0	0	0	0	154
rank value of 12.4s =	0	0	0	0	0	0	0	1	0	0	0	156
rank value of 13s =	0	0	0	0	0	1	0	2	0	0	0	158
rank value of 15s =	1	0	0	0	0	0	0	0	0	0	0	160
rank value of 17s =	1	0	0	0	0	0	0	0	0	0	1	161.5
rank value of 18s =	2	0	0	0	0	0	0	0	0	0	0	163.5
rank value of 20s =	1	0	0	0	0	0	0	0	1	0	0	165.5
rank value of 22s =	0	0	0	0	0	0	0	0	0	1	0	167
rank value of 22.6s =	0	0	1	0	0	0	0	0	0	0	0	168
rank value of 24s =	1	0	0	0	0	0	0	0	0	0	0	169
rank value of 25s =	0	0	0	0	0	0	0	0	0	0	1	170
rank value of 26s =	1	0	0	0	0	0	0	1	0	0	1	172
rank value of 26.5s =	1	0	0	0	0	0	0	0	0	0	0	174
rank value of 27s =	0	0	0	0	0	0	0	1	0	0	0	175
rank value of 28s =	0	0	0	0	0	0	0	0	1	0	0	176
rank value of 29s =	1	0	0	0	0	0	0	0	0	0	0	177
rank value of 29.2s =	1	0	0	0	0	0	0	0	0	0	0	178
rank value of 31s =	1	0	1	0	0	0	0	0	0	0	0	179.5
rank value of 38s =	0	0	0	0	0	0	0	0	1	0	0	181
rank value of 40s =	0	0	0	1	0	0	0	0	0	0	0	182
rank value of 40.3s =	0	0	0	0	0	0	0	0	0	1	0	183
rank value of 42s =	0	0	0	0	0	0	0	1	0	0	0	184
rank value of 47.4s =	0	0	0	0	0	0	0	0	0	0	1	185
rank value of 53.9s =	0	0	0	0	0	0	0	0	0	0	1	186
rank value of 63s =	0	0	0	0	0	0	0	0	0	1	0	187
rank value of 68s =	0	0	0	0	0	0	0	0	1	0	0	188
rank value of 69s =	1	0	0	0	0	0	0	0	0	0	0	189
rank value of 70s =	0	0	0	1	0	0	0	0	0	0	0	190
rank value of 71s =	0	0	0	0	0	0	0	0	0	0	1	191
rank value of 77s =	1	0	0	0	0	0	0	0	0	0	0	192
rank value of 82s =	0	0	0	0	0	0	0	0	0	1	0	193
rank value of 85s =	0	0	0	0	0	0	0	0	1	0	0	194
rank value of 88s =	0	0	0	0	0	0	0	0	1	0	0	195
rank value of 89s =	0	0	0	0	0	0	0	0	0	0	1	196
rank value of 94s =	0	0	0	0	0	0	0	0	0	1	0	197
rank value of 96s =	0	0	0	0	0	0	0	0	0	0	1	198
rank value of 100s =	0	0	0	0	0	0	0	0	0	1	0	199
rank value of 110s =	0	0	0	0	0	0	0	0	0	1	0	200
rank value of 120s =	0	0	0	0	0	0	0	0	0	2	0	201.5
rank value of 130s =	0	0	0	0	0	0	0	0	0	0	1	203
rank value of 140s =	0	0	0	0	0	0	0	0	0	0	1	204
rank value of 150s =	0	0	0	0	0	0	0	0	0	1	1	205.5
rank value of 220s =	0	0	0	1	0	0	0	0	0	0	0	207
rank value of 240s =	0	0	0	1	0	0	0	0	0	0	0	208
rank value of 330s =	0	0	0	0	0	1	0	0	0	0	0	209
rank value of 450s =	0	0	0	0	0	0	0	0	0	0	1	210
n =	**22**	**21**	**16**	**20**	**20**	**20**	**18**	**18**	**19**	**20**	**16**	

Sum of rank value calculations

58	928	580	696	986	812	928	580	464	522	116
0	0	0	116	0	0	0	0	0	0	0
0	0	0	0	117.5	117.5	0	0	0	0	0

0	120.5	120.5	0	0	120.5	120.5	0	0	0	0
0	0	123	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	124.5	124.5	0	0
0	0	126	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	127	0	0	0
0	0	0	0	0	0	128	0	0	0	0
0	0	0	0	0	0	0	0	0	129	0
130	0	0	0	0	0	0	0	0	0	0
0	0	0	0	131	0	0	0	0	0	0
0	0	0	0	0	132	0	0	0	0	0
133	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	134	0	0	0	0	0
0	135.5	0	135.5	0	0	0	0	0	0	0
0	137	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	138	0	0
0	0	0	0	139	0	0	0	0	0	0
140	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	141
142.5	0	0	0	0	0	0	0	142.5	0	0
0	0	0	0	0	0	0	0	144	0	0
0	0	145	0	0	0	0	0	0	0	0
0	146	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	147	0	0
0	0	0	148	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	149
150	0	0	0	0	0	0	0	0	0	0
0	151	0	0	0	0	0	0	0	0	0
152	0	0	0	0	0	0	0	0	0	0
308	0	0	154	0	0	0	0	0	0	0
0	0	0	0	0	0	0	156	0	0	0
0	0	0	0	0	158	0	316	0	0	0
160	0	0	0	0	0	0	0	0	0	0
161.5	0	0	0	0	0	0	0	0	0	161.5
327	0	0	0	0	0	0	0	0	0	0
165.5	0	0	0	0	0	0	0	165.5	0	0
0	0	0	0	0	0	0	0	0	167	0
0	0	168	0	0	0	0	0	0	0	0
169	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	170
172	0	0	0	0	0	0	172	0	0	172
174	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	175	0	0	0
0	0	0	0	0	0	0	0	176	0	0
177	0	0	0	0	0	0	0	0	0	0
178	0	0	0	0	0	0	0	0	0	0
179.5	0	179.5	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	181	0	0
0	0	0	182	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	183	0
0	0	0	0	0	0	0	184	0	0	0
0	0	0	0	0	0	0	0	0	0	185
0	0	0	0	0	0	0	0	0	0	186
0	0	0	0	0	0	0	0	0	187	0
0	0	0	0	0	0	0	0	188	0	0
189	0	0	0	0	0	0	0	0	0	0
0	0	0	190	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	191
192	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	193	0
0	0	0	0	0	0	0	0	194	0	0
0	0	0	0	0	0	0	0	195	0	0
0	0	0	0	0	0	0	0	0	0	196
0	0	0	0	0	0	0	0	0	197	0
0	0	0	0	0	0	0	0	0	0	198
0	0	0	0	0	0	0	0	0	199	0
0	0	0	0	0	0	0	0	0	200	0
0	0	0	0	0	0	0	0	0	403	0
0	0	0	0	0	0	0	0	0	0	203
0	0	0	0	0	0	0	0	0	0	204
0	0	0	0	0	0	0	0	0	205.5	205.5
0	0	0	207	0	0	0	0	0	0	0
0	0	0	208	0	0	0	0	0	0	0
0	0	0	0	0	209	0	0	0	0	0

	0	0	0	0	0	0	0	0	0	0	210
sum of rank values (R_i)	**3458**	**1618**	**1442**	**2036.5**	**1373.5**	**1683**	**1176.5**	**1834.5**	**2259.5**	**2585.5**	**2688**

Compute the Kruskal-Wallis statistic:

$$H = \{[12/N(N+1)] * [\ S^{K}_{i=1}\ (R_i^2)/N_i]\} -3(N+1)$$

Well =	**Background**	**MW-1A**	**MW-2**	**MW-2D**	**MW-3**	**MW-3D**	**MW-4A**	**MW-8**	**MW-15**
Ri^2/N_i =	720073.3	207367	94325	141624	76897	186966	268702	334241	451584

$N_{i\ bg}$ = 59
N = 210
H = 39.11

Adjust H for ties:

T_i = 2E+06 sum of T1..T4

$H' = H/(1-(T_i/(N^3-N)))$
H' = 46.80
Chi-square = 15.51

Compare the calculated value H' to the tabulated Chi-square value with K-1 = # groups -1 = 17df at the 5% significance level from Table 1 of the IFG. The value is 15.51 which is less than H' =46.80.
Therefore, there is evidence of significant differences between the well groups.
Post-hoc pairwise comparisons are necessary (see below).

Calculate the critical values to compare each compliance well to the background wells:

Critical Value (C_x) = $P(N(N+1)/12)^{0.5} * (1/N_{i\ bg}+1/N_x)^{0.5}$
P = 2.33 Percentile of Standard Normal Distribution
from Table 4 of IFG
N = total sample size
$N_{i\ bg}$ = total samples (N_i) of background data
N_x = total samples (N_i) of well x

Difference between average ranks (Dx) = Rbar (well x) - avg Rbar (background)

Well =	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	**MW-15**
Rbar (well x) =	101.8	68.7	84.2	65.4	101.9	118.9	129.3	168.0
avg Rbar (background) =	110.5	110.5	110.5	110.5	110.5	110.5	110.5	110.5
Dx =	-8.6	-41.8	-26.3	-45.1	-8.6	8.4	18.8	57.5
Cx =	36.6	36.6	36.6	38.1	38.1	37.3	36.6	39.9
Statistical Significance ?	No	No	No	No	No	No	No	**Yes**
If SSI, is current event above MCL?	-	-	-	-	-	-	-	No

Compare each difference (Dx) with the corresponding critical value (Cx).
The Dx value for the above indicated wells do exceed the corresponding Cx value.
Therefore, we conclude that the concentration of Total Copper averaged over these compliance wells are significantly greater than that of the background wells.
Shewart-CUSUM Control Charts should be performed for each failing well to check for statistical significance.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J10-1957-20

Compound: **Total Copper**
NC MCL (mg/l): 1000
Method: Shewhart-CUSUM Control Chart

Part 1: Check for Normality

	MW-15	MDL
9/26/2002	**450**	**2**
4/28/2003	**71**	**2**
10/30/2003	**150**	**2**
4/20/2004	**89**	**2**
10/21/2004	**140**	**2**
4/18/2005	**130**	**2**
10/13/2005	**96**	**2**
4/25/2006	ND	**200**
10/20/2006	**25**	**5**
4/25/2007	**26**	**10**
10/31/2007	**47.4**	**5**
4/23/2008	**17**	**5**
10/20/2008	**9.7**	**5**
4/22/2009	NS	**5**
10/26/2009	**7.1**	**5**
4/22/2010	ND	**5**
10/27/2010	**53.9**	**5**

If not detected (ND), use half of the detection limit.

		X_i values =
450		47275946
71		-5279.386
150		233602.63
89		0.2027793
140		137288.27
130		71926.419
96		436.81356
100		1555.8554
25		-254990.9
26		-243116.7
47.4		-68984.06
17		-364185.6
9.7		-487675.7
7.1		-537615.7
2.5		-634116.5
53.9		-41108.28

X_{bar} = 88.4125
SD = 108.16728
N = 16
$1/NS_i(X_i-X_{bar})^3$ = 2817730.2
g_1 = 2.4527586

Since the Coefficient of Skewness of 2.45 is greater than 1.0, the real data appear to be significantly skewed.
Do not assume that the data follow a Normal distribution.
Perform the Skewness Test on the natural log of the values.

		X_i values =
ln =	6.1092476	11.96344
	4.2626799	0.0854942
	5.0106353	1.678747
	4.4886364	0.2960606
	4.9416424	1.4030319
	4.8675345	1.1424375
	4.5643482	0.4088517
	4.6051702	0.4800922
	3.2188758	-0.219552
	3.2580965	-0.179454
	3.8586222	4.853E-05
	2.8332133	-0.967166
	2.2721259	-3.724024
	1.9600948	-6.456174
	0.9162907	-24.53704
	3.9871305	0.0044908

X_{bar} = 3.8221465
SD = 1.3365163
N = 16
$1/NS_i(X_i-X_{bar})^3$ = -1.163795
g_1 = 0.5370277

Since the Coefficient of Skewness of 0.54 is less than 1.0, the data appear not to be significantly skewed. Proceed with further statistical tests using the log-transformed values shown above.

Part 2: Shewhart-CUSUM Control Chart

Date	MW-15	MDL	Data for Testing
9/26/2002	**450**	2	6.1092476
4/28/2003	**71**	2	4.2626799
10/30/2003	**150**	2	5.0106353
4/20/2004	**89**	2	4.4886364
10/21/2004	**140**	2	4.9416424
4/18/2005	**130**	2	4.8675345
10/13/2005	**96**	2	4.5643482
4/25/2006	ND	200	4.6051702
10/20/2006	**25**	5	3.2188758
4/25/2007	**26**	10	3.2580965
10/31/2007	**47.4**	5	3.8586222
4/23/2008	**17**	5	2.8332133
10/20/2008	**9.7**	5	2.2721259
4/22/2009	NS	5	-
10/26/2009	**7.1**	5	1.9600948
4/22/2010	ND	5	0.9162907
10/27/2010	**53.9**	5	3.9871305

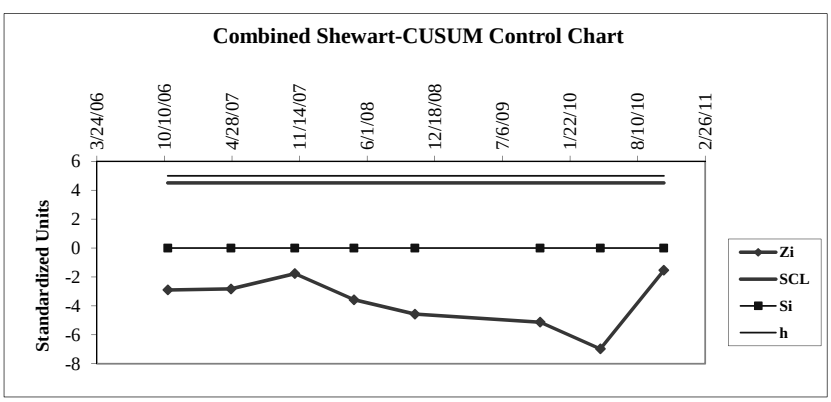
Compute the mean and standard deviation of the historical data:

4.8562368 = x_{mean} (Mean of N1-N8 historical data)
0.5653027 = s (Standard Deviation of N1-N8 historical data)
1 = k (constant, reference value)
5 = h (constant, upper control limit for the CUSUM scheme)
4.5 = SCL (Constant, upper Shewhart Control Limit)

Compute the standardized mean (Z_i) and the cumulative sum (S_i) for each concentration.

Date	x_i	Z_i	S_i	h	SCL
			0		
10/20/2006	3.2188758	-2.8964323	0	5	4.5
4/25/2007	3.2580965	-2.8270522	0	5	4.5
10/31/2007	3.8586222	-1.764744	0	5	4.5
4/23/2008	2.8332133	-3.5786552	0	5	4.5
10/20/2008	2.2721259	-4.5711986	0	5	4.5
10/26/2009	1.9600948	-5.1231703	0	5	4.5
4/22/2010	0.9162907	-6.9696219	0	5	4.5
10/27/2010	3.9871305	-1.5374176	0	5	4.5

Plot Z_i and S_i versus time:



Compare the Z_i and S_i values to their respective control limits of SCL and h.
The limits were not exceeded and do not indicate statistically significant evidence of contamination at the site.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J10-1957-20

Compound: **Total Lead**
NC MCL (mg/l): 15
Method: Kruskal-Wallis
Background: MW-11S, MW-11D, & MW-14

	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MDL
04/24/00	**35**	NS	NS	ND	ND	ND	ND	**11**	ND	ND	NS	**10**
06/26/00	ND	**10**	NS	NS	NS	NS	NS	NS	NS	NS	NS	**10**
07/26/00	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	**10**
09/18/00	NS	NS	NS	NT	NT	NS	NS	NS	ND	NS	NS	**10**
04/09/01	ND	**59**	NS	ND	ND	ND	ND	ND	**18**	**2.5**	NS	**10**
09/18/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**10**
10/29/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**10**
01/30/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**10**
02/28/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**10**
04/15/02	**13**	ND	NS	ND	ND	ND	ND	ND	**13**	**29**	NS	**10**
09/26/02	ND	**76**	**29**	ND	ND	ND	ND	ND	**150**	**20**	**740**	**10**
04/28/03	ND	ND	ND	ND	ND	ND	ND	ND	**25**	ND	**300**	**10**
10/30/03	**8.7**	**12**	NT	ND	ND	ND	ND	ND	**39**	**7.4**	**640**	**5**
04/20/04	**7.2**	**7**	**5.2**	**6.4**	**5.4**	ND	ND	ND	**12**	**39**	**250**	**5**
10/21/04	**7.2**	**5.6**	**5.7**	ND	ND	ND	ND	ND	ND	**24**	**430**	**5**
04/18/05	**13**	**8**	**5.2**	**73**	ND	ND	ND	ND	ND	**39**	**380**	**5**
10/13/05	**14**	**6.9**	ND	**20**	ND	ND	ND	ND	ND	**29**	**290**	**5**
04/25/06	**15**	ND	ND	ND	ND	ND	ND	ND	**53**	**19**	**300**	**10**
10/20/06	**20**	ND	ND	ND	ND	ND	ND	ND	**32**	ND	**89**	**5**
04/25/07	ND	ND	ND	ND	ND	**96**	ND	ND	ND	ND	**69**	**10**
10/31/07	**17.5**	**8.1**	ND	ND	ND	ND	ND	ND	ND	**12.3**	**123**	**5**
04/23/08	ND	ND	**8.4**	ND	ND	ND	ND	ND	**5.8**	ND	**50.2**	**5**
10/20/08	ND	**13.5**	**7.6**	ND	ND	ND	ND	ND	ND	ND	**25.9**	**5**
04/22/09	ND	**8.7**	**24.4**	ND	ND	ND	ND	ND	**9.8**	ND	NS	**5**
10/26/09	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	**24.7**	**5**
04/22/10	ND	**10.5**	ND	ND	ND	ND	NS	NS	ND	ND	**9.2**	**5**
10/27/10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**16**	**5**
N_i	22	21	16	20	20	20	18	18	20	20	16	
sum of rank values (R_i)	2534.5	2604.5	1745.5	1723.5	1483.5	1540.5	1269.0	1362.5	2486.5	2461.0	3155.0	
avg rank value (Rbar)	115.2	124.0	109.1	86.2	74.2	77.0	70.5	75.7	124.3	123.1	197.2	

	Number of each rank value											Rank Value
rank value of NDs =	12	9	9	17	19	19	18	17	10	10	0	70.5
rank value of 2.5s =	0	0	0	0	0	0	0	0	0	1	0	141
rank value of 5.2s =	0	0	2	0	0	0	0	0	0	0	0	142.5
rank value of 5.4s =	0	0	0	0	1	0	0	0	0	0	0	144
rank value of 5.6s =	0	1	0	0	0	0	0	0	0	0	0	145
rank value of 5.7s =	0	0	1	0	0	0	0	0	0	0	0	146
rank value of 5.8s =	0	0	0	0	0	0	0	0	1	0	0	147
rank value of 6.4s =	0	0	0	1	0	0	0	0	0	0	0	148
rank value of 6.9s =	0	1	0	0	0	0	0	0	0	0	0	149
rank value of 7s =	0	1	0	0	0	0	0	0	0	0	0	150
rank value of 7.2s =	2	0	0	0	0	0	0	0	0	0	0	151.5
rank value of 7.4s =	0	0	0	0	0	0	0	0	0	1	0	153
rank value of 7.6s =	0	0	1	0	0	0	0	0	0	0	0	154
rank value of 8s =	0	1	0	0	0	0	0	0	0	0	0	155
rank value of 8.1s =	0	1	0	0	0	0	0	0	0	0	0	156
rank value of 8.4s =	0	0	1	0	0	0	0	0	0	0	0	157
rank value of 8.7s =	1	1	0	0	0	0	0	0	0	0	0	158.5
rank value of 9.2s =	0	0	0	0	0	0	0	0	0	0	1	160
rank value of 9.8s =	0	0	0	0	0	0	0	0	1	0	0	161

rank value of 10s =	0	1	0	0	0	0	0	0	0	0	0	162
rank value of 10.5s =	0	1	0	0	0	0	0	0	0	0	0	163
rank value of 11s =	0	0	0	0	0	0	0	1	0	0	0	164
rank value of 12s =	0	1	0	0	0	0	0	0	1	0	0	165.5
rank value of 12.3s =	0	0	0	0	0	0	0	0	0	1	0	167
rank value of 13s =	2	0	0	0	0	0	0	0	1	0	0	169
rank value of 13.5s =	0	1	0	0	0	0	0	0	0	0	0	171
rank value of 14s =	1	0	0	0	0	0	0	0	0	0	0	172
rank value of 15s =	1	0	0	0	0	0	0	0	0	0	0	173
rank value of 16s =	0	0	0	0	0	0	0	0	0	0	1	174
rank value of 17.5s =	1	0	0	0	0	0	0	0	0	0	0	175
rank value of 18s =	0	0	0	0	0	0	0	0	1	0	0	176
rank value of 19s =	0	0	0	0	0	0	0	0	0	1	0	177
rank value of 20s =	1	0	0	1	0	0	0	0	0	1	0	179
rank value of 24s =	0	0	0	0	0	0	0	0	0	1	0	181
rank value of 24.4s =	0	0	1	0	0	0	0	0	0	0	0	182
rank value of 24.7s =	0	0	0	0	0	0	0	0	0	0	1	183
rank value of 25s =	0	0	0	0	0	0	0	0	1	0	0	184
rank value of 25.9s =	0	0	0	0	0	0	0	0	0	0	1	185
rank value of 29s =	0	0	1	0	0	0	0	0	0	2	0	187
rank value of 32s =	0	0	0	0	0	0	0	0	1	0	0	189
rank value of 35s =	1	0	0	0	0	0	0	0	0	0	0	190
rank value of 39s =	0	0	0	0	0	0	0	0	1	2	0	192
rank value of 50.2s =	0	0	0	0	0	0	0	0	0	0	1	194
rank value of 53s =	0	0	0	0	0	0	0	0	1	0	0	195
rank value of 59s =	0	1	0	0	0	0	0	0	0	0	0	196
rank value of 69s =	0	0	0	0	0	0	0	0	0	0	1	197
rank value of 73s =	0	0	0	1	0	0	0	0	0	0	0	198
rank value of 76s =	0	1	0	0	0	0	0	0	0	0	0	199
rank value of 89s =	0	0	0	0	0	0	0	0	0	0	1	200
rank value of 96s =	0	0	0	0	0	1	0	0	0	0	0	201
rank value of 123s =	0	0	0	0	0	0	0	0	0	0	1	202
rank value of 150s =	0	0	0	0	0	0	0	0	1	0	0	203
rank value of 250s =	0	0	0	0	0	0	0	0	0	0	1	204
rank value of 290s =	0	0	0	0	0	0	0	0	0	0	1	205
rank value of 300s =	0	0	0	0	0	0	0	0	0	0	2	206.5
rank value of 380s =	0	0	0	0	0	0	0	0	0	0	1	208
rank value of 430s =	0	0	0	0	0	0	0	0	0	0	1	209
rank value of 640s =	0	0	0	0	0	0	0	0	0	0	1	210
rank value of 740s =	0	0	0	0	0	0	0	0	0	0	1	211
n =	**22**	**21**	**16**	**20**	**20**	**20**	**18**	**18**	**20**	**20**	**16**	

Sum of rank value calculations

846	634.5	634.5	1198.5	1339.5	1339.5	1269	1198.5	705	705	0
0	0	0	0	0	0	0	0	0	141	0
0	0	285	0	0	0	0	0	0	0	0

0	0	0	0	144	0	0	0	0	0	0
0	145	0	0	0	0	0	0	0	0	0
0	0	146	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	147	0	0
0	0	0	148	0	0	0	0	0	0	0
0	149	0	0	0	0	0	0	0	0	0
0	150	0	0	0	0	0	0	0	0	0
303	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	153	0
0	0	154	0	0	0	0	0	0	0	0
0	155	0	0	0	0	0	0	0	0	0
0	156	0	0	0	0	0	0	0	0	0
0	0	157	0	0	0	0	0	0	0	0
158.5	158.5	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	160
0	0	0	0	0	0	0	0	161	0	0
0	162	0	0	0	0	0	0	0	0	0
0	163	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	164	0	0	0
0	165.5	0	0	0	0	0	0	165.5	0	0
0	0	0	0	0	0	0	0	0	167	0
338	0	0	0	0	0	0	0	169	0	0
0	171	0	0	0	0	0	0	0	0	0
172	0	0	0	0	0	0	0	0	0	0
173	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	174
175	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	176	0	0
0	0	0	0	0	0	0	0	0	177	0
179	0	0	179	0	0	0	0	0	179	0
0	0	0	0	0	0	0	0	0	181	0
0	0	182	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	183
0	0	0	0	0	0	0	0	184	0	0
0	0	0	0	0	0	0	0	0	0	185
0	0	187	0	0	0	0	0	0	374	0
0	0	0	0	0	0	0	0	189	0	0
190	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	192	384	0
0	0	0	0	0	0	0	0	0	0	194
0	0	0	0	0	0	0	0	195	0	0
0	196	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	197
0	0	0	198	0	0	0	0	0	0	0
0	199	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	200
0	0	0	0	0	201	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	202
0	0	0	0	0	0	0	0	203	0	0
0	0	0	0	0	0	0	0	0	0	204
0	0	0	0	0	0	0	0	0	0	205
0	0	0	0	0	0	0	0	0	0	413
0	0	0	0	0	0	0	0	0	0	208
0	0	0	0	0	0	0	0	0	0	209
0	0	0	0	0	0	0	0	0	0	210
0	0	0	0	0	0	0	0	0	0	211

sum of rank values (R_i)	**2534.5**	**2604.5**	**1745.5**	**1723.5**	**1483.5**	**1540.5**	**1269**	**1362.5**	**2486.5**	**2461**	**3155**

Compute the Kruskal-Wallis statistic:

$$H = \{[12/N(N+1)] * [S^{K}_{i=1} (R_i^2)/N_i]\} -3(N+1)$$

Well =	**Background**	**MW-1A**	**MW-2**	**MW-2D**	**MW-3**	**MW-3D**	**MW-4A**	**MW-8**	**MW-15**
Ri^2/N_i =	803327.8	148523	110039	118657	89465	103134	309134	302826	622127

$N_{i\,bg}$ = 59
N = 211
H = 63.43

Adjust H for ties:

T_i = 3E+06 sum of T1..T3

$H' = H/(1-(T_i/(N^3-N)))$
H' = 89.60
Chi-square = 15.51

Compare the calculated value H' to the tabulated Chi-square value with K-1 = # groups -1 = 17df at the 5% significance level from Table 1 of the IFG. The value is 15.51 which is less than H' =89.60.
Therefore, there is evidence of significant differences between the well groups.
Post-hoc pairwise comparisons are necessary (see below).

Calculate the critical values to compare each compliance well to the background wells:

Critical Value (C_x) = $P(N(N+1)/12)^{0.5} * (1/N_{i\,bg}+1/N_x)^{0.5}$
P = 2.33 Percentile of Standard Normal Distribution
from Table 4 of IFG
N = total sample size
$N_{i\,bg}$ = total samples (N_i) of background data
N_x = total samples (N_i) of well x

Difference between average ranks (Dx) = Rbar (well x) - avg Rbar (background)

Well =	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	**MW-15**
Rbar (well x) =	86.2	74.2	77.0	70.5	75.7	124.3	123.1	197.2
avg Rbar (background) =	116.7	116.7	116.7	116.7	116.7	116.7	116.7	116.7
Dx =	-30.5	-42.5	-39.7	-46.2	-41.0	7.6	6.4	80.5
Cx =	36.8	36.8	36.8	38.3	38.3	36.8	36.8	40.1
Statistical Significance ?	No	No	No	No	No	No	No	**Yes**
If SSI, is current event above MCL?	-	-	-	-	-	-	-	**Yes**

Compare each difference (Dx) with the corresponding critical value (Cx).
The Dx value for the above indicated wells do exceed the corresponding Cx value.
Therefore, we conclude that the concentration of Total Lead averaged over these compliance wells are significantly greater than that of the background wells.
Shewart-CUSUM Control Charts should be performed for each failing well to check for statistical significance.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J10-1957-20

Compound: **Total Lead**
NC MCL (mg/l): 15
Method: Shewhart-CUSUM Control Chart

Part 1: Check for Normality

	MW-15	MDL
9/26/2002	**740**	**10**
4/28/2003	**300**	**10**
10/30/2003	**640**	**5**
4/20/2004	**250**	**5**
10/21/2004	**430**	**5**
4/18/2005	**380**	**5**
10/13/2005	**290**	**5**
4/25/2006	**300**	**10**
10/20/2006	**89**	**5**
4/25/2007	**69**	**10**
10/31/2007	**123**	**5**
4/23/2008	**50.2**	**5**
10/20/2008	**25.9**	**5**
4/22/2009	NS	**5**
10/26/2009	**24.7**	**5**
4/22/2010	**9.2**	**5**
10/27/2010	**16**	**5**

If not detected (ND), use half of the detection limit.

	X_i values =
740	129890554
300	293251.23
640	67139996
250	4441.2712
430	7580069.6
380	3140197.2
290	179764.24
300	293251.23
89	-3021113
69	-4456487
123	-1351523
50.2	-6164978
25.9	-8955178
24.7	-9111322
9.2	-11294079
16	-10297982

X_{bar} = 233.5625
SD = 226.89638
N = 16
$1/NS_i(X_i-X_{bar})^3$ = 9616803.9
g_1 = 0.9069663

Since the Coefficient of Skewness of 0.91 is less than 1.0, the data appear not to be significantly skewed.
Proceed with further statistical tests using the real detected values shown above.

ln =	X_i values =
6.6066502	6.0358006
5.7037825	0.7732663
6.4614682	4.7040151
5.5214609	0.3979384
6.0637852	2.0866636
5.9401713	1.5377937
5.6698809	0.6907093
5.7037825	0.7732663
4.4886364	-0.026274
4.2341065	-0.168029
4.8121844	1.811E-05
3.916015	-0.658293
3.254243	-3.593386
3.2068032	-3.937721
2.2192035	-16.90967
2.7725887	-8.161076

X_{bar} = 4.7859226
SD = 1.3838735
N = 16
$1/NS_i(X_i-X_{bar})^3$ = -1.028436
g_1 = 0.4274951

Use the real values (not log-transformed) indicated in the previous section.

Part 2: Shewhart-CUSUM Control Chart

Date	MW-15	MDL	Data for Testing
9/26/2002	**740**	10	740
4/28/2003	**300**	10	300
10/30/2003	**640**	5	640
4/20/2004	**250**	5	250
10/21/2004	**430**	5	430
4/18/2005	**380**	5	380
10/13/2005	**290**	5	290
4/25/2006	**300**	10	300
10/20/2006	**89**	5	89
4/25/2007	**69**	10	69
10/31/2007	**123**	5	123
4/23/2008	**50.2**	5	50.2
10/20/2008	**25.9**	5	25.9
4/22/2009	NS	5	-
10/26/2009	**24.7**	5	24.7
4/22/2010	**9.2**	5	9.2
10/27/2010	**16**	5	16

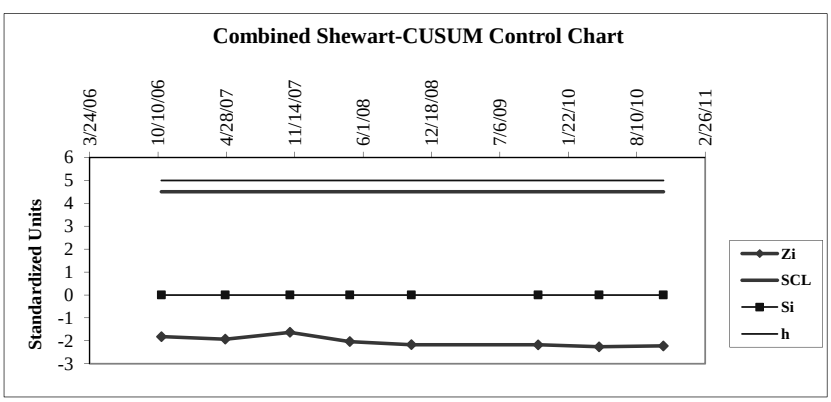
Compute the mean and standard deviation of the historical data:

416.25 = x_{mean} (Mean of N1-N8 historical data)
180.07439 = s (Standard Deviation of N1-N8 historical data)
1 = k (constant, reference value)
5 = h (constant, upper control limit for the CUSUM scheme)
4.5 = SCL (Constant, upper Shewhart Control Limit)

Compute the standardized mean (Z_i) and the cumulative sum (S_i) for each concentration.

Date	x_i	Z_i	S_i	h	SCL
			0		
10/20/2006	89	-1.8173045	0	5	4.5
4/25/2007	69	-1.9283697	0	5	4.5
10/31/2007	123	-1.6284937	0	5	4.5
4/23/2008	50.2	-2.032771	0	5	4.5
10/20/2008	25.9	-2.1677152	0	5	4.5
10/26/2009	24.7	-2.1743792	0	5	4.5
4/22/2010	9.2	-2.2604547	0	5	4.5
10/27/2010	16	-2.2226925	0	5	4.5

Plot Z_i and S_i versus time:



Compare the Z_i and S_i values to their respective control limits of SCL and h.
The limits were not exceeded and do not indicate statistically significant evidence of contamination at the site.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J10-1957-20

Compound: **Total Nickel**
NC MCL (mg/l): 100
Method: Kruskal-Wallis
Background: MW-11S, MW-11D, & MW-14

	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MDL
04/24/00	**15**	NS	NS	**17**	**12**	**8.3**	ND	**24**	**6.7**	**22**	NS	**5**
06/26/00	**15**	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	**5**
07/26/00	**16**	**9.7**	NS	NS	NS	NS	NS	NS	NS	NS	NS	**5**
09/18/00	NS	NS	NS	**8.8**	NT	NS	NS	NS	NT	NS	NS	**50**
04/09/01	**76**	**7.2**	NS	**9.6**	**5.3**	ND	ND	**18**	**28**	**6.1**	NS	**5**
09/18/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**5**
10/29/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**5**
01/30/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**5**
02/28/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**50**
04/15/02	**74**	ND	NS	ND	ND	ND	**6**	**9**	**44**	**68**	NS	**5**
09/26/02	**16**	**6.8**	**31**	**400**	ND	ND	ND	**27**	**40**	**78**	**430**	**5**
04/28/03	ND	ND	ND	**90**	ND	ND	ND	ND	ND	**26**	**70**	**5**
10/30/03	**19**	ND	NT	**6.9**	**6.9**	ND	ND	ND	**48**	ND	**190**	**5**
04/20/04	**20**	ND	ND	**30**	**7.3**	ND	ND	**12**	**5.3**	**49**	**110**	**5**
10/21/04	**12**	ND	ND	**13**	ND	ND	ND	ND	ND	**35**	**160**	**5**
04/18/05	**29**	**9.6**	**17**	**460**	ND	ND	**5.5**	**5.4**	ND	**59**	**170**	**5**
10/13/05	**29**	ND	ND	**160**	**6.8**	ND	ND	**6.1**	ND	**46**	**100**	**5**
04/25/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**88**	**50**
10/20/06	**22**	ND	**8.3**	**25**	ND	ND	ND	ND	**13**	ND	**24**	**5**
04/25/07	ND	ND	ND	ND	ND	**330**	ND	ND	ND	ND	ND	**50**
10/31/07	**24**	ND	**8**	**8.4**	**13.8**	ND	**5.8**	**9.8**	ND	**20.2**	**36.2**	**5**
04/23/08	**7.3**	ND	**12.9**	**6.3**	**10.8**	**5.7**	ND	**11.3**	**5.3**	ND	**19**	**5**
10/20/08	**23**	ND	**21**	**11.1**	**10.7**	**7.5**	ND	**14**	ND	ND	**8.5**	**5**
04/22/09	**5.6**	**7.2**	**19.7**	**16.7**	**10.9**	**6**	**5.1**	**14**	**6**	ND	NS	**5**
10/26/09	**6.7**	ND	**5.2**	**6**	**18**	**7.5**	NS	NS	NS	**6**	**8.4**	**5**
04/22/10	**8.6**	**9.6**	**7.6**	ND	**6.2**	ND	NS	NS	ND	ND	ND	**5**
10/27/10	**7**	ND	ND	ND	**7.4**	ND	**21.5**	**19**	ND	ND	**7.5**	**5**

N_i	22	21	16	21	20	20	18	18	19	20	16
sum of rank values (R_i)	3126.0	1467.0	1640.5	2776.5	1946.5	1444.0	1180.0	2052.0	1778.5	2313.0	2642.0
avg rank value (Rbar)	142.1	69.9	102.5	132.2	97.3	72.2	65.6	114.0	93.6	115.7	165.1

	Number of each rank value											Rank Value
rank value of NDs =	3	15	7	5	8	14	13	6	10	9	2	46.5
rank value of 5.1s =	0	0	0	0	0	0	1	0	0	0	0	93
rank value of 5.2s =	0	0	1	0	0	0	0	0	0	0	0	94
rank value of 5.3s =	0	0	0	0	1	0	0	0	2	0	0	96
rank value of 5.4s =	0	0	0	0	0	0	0	1	0	0	0	98
rank value of 5.5s =	0	0	0	0	0	0	1	0	0	0	0	99
rank value of 5.6s =	1	0	0	0	0	0	0	0	0	0	0	100
rank value of 5.7s =	0	0	0	0	0	1	0	0	0	0	0	101
rank value of 5.8s =	0	0	0	0	0	0	1	0	0	0	0	102
rank value of 6s =	0	0	0	1	0	1	0	0	1	1	0	104.5
rank value of 6.1s =	0	0	0	0	0	0	0	1	0	1	0	107.5
rank value of 6.2s =	0	0	0	0	1	0	1	0	0	0	0	109.5
rank value of 6.3s =	0	0	0	1	0	0	0	0	0	0	0	111
rank value of 6.7s =	1	0	0	0	0	0	0	0	1	0	0	112.5
rank value of 6.8s =	0	1	0	0	1	0	0	0	0	0	0	114.5
rank value of 6.9s =	0	0	0	1	1	0	0	0	0	0	0	116.5
rank value of 7s =	1	0	0	0	0	0	0	0	0	0	0	118
rank value of 7.2s =	0	2	0	0	0	0	0	0	0	0	0	119.5
rank value of 7.3s =	1	0	0	0	1	0	0	0	0	0	0	121.5
rank value of 7.4s =	0	0	0	0	1	0	0	0	0	0	0	123
rank value of 7.5s =	0	0	0	0	0	2	0	0	0	0	1	125
rank value of 7.6s =	0	0	1	0	0	0	0	0	0	0	0	127
rank value of 8s =	0	0	1	0	0	0	0	0	0	0	0	128
rank value of 8.3s =	0	0	1	0	0	1	0	0	0	0	0	129.5
rank value of 8.4s =	0	0	0	1	0	0	0	0	0	0	1	131.5

rank value of 8.5s =	0	0	0	0	0	0	0	0	0	0	1	133
rank value of 8.6s =	1	0	0	0	0	0	0	0	0	0	0	134
rank value of 8.8s =	0	0	0	1	0	0	0	0	0	0	0	135
rank value of 9.2s =	0	0	0	0	0	0	0	1	0	0	0	136
rank value of 9.6s =	0	2	0	1	0	0	0	0	0	0	0	138
rank value of 9.7s =	0	1	0	0	0	0	0	0	0	0	0	140
rank value of 9.8s =	0	0	0	0	0	0	0	1	0	0	0	141
rank value of 10.7s =	0	0	0	0	1	0	0	0	0	0	0	142
rank value of 10.8s =	0	0	0	0	1	0	0	0	0	0	0	143
rank value of 10.9s =	0	0	0	0	1	0	0	0	0	0	0	144
rank value of 11.1s =	0	0	0	1	0	0	0	0	0	0	0	145
rank value of 11.3s =	0	0	0	0	0	0	0	1	0	0	0	146
rank value of 12s =	1	0	0	0	1	0	0	1	0	0	0	148
rank value of 12.9s =	0	0	1	0	0	0	0	0	0	0	0	150
rank value of 13s =	0	0	0	1	0	0	0	0	1	0	0	151.5
rank value of 13.8s =	0	0	0	0	1	0	0	0	0	0	0	153
rank value of 14s =	0	0	0	0	0	0	0	2	0	0	0	154.5
rank value of 15s =	2	0	0	0	0	0	0	0	0	0	0	156.5
rank value of 16s =	2	0	0	0	0	0	0	0	0	0	0	158.5
rank value of 16.7s =	0	0	0	1	0	0	0	0	0	0	0	160
rank value of 17s =	0	0	1	1	0	0	0	0	0	0	0	161.5
rank value of 18s =	0	0	0	0	1	0	0	1	0	0	0	163.5
rank value of 19s =	1	0	0	0	0	0	0	1	0	0	1	166
rank value of 19.7s =	0	0	1	0	0	0	0	0	0	0	0	168
rank value of 20s =	1	0	0	0	0	0	0	0	0	0	0	169
rank value of 20.2s =	0	0	0	0	0	0	0	0	0	1	0	170
rank value of 21s =	0	0	1	0	0	0	0	0	0	0	0	171
rank value of 21.5s =	0	0	0	0	0	0	1	0	0	0	0	172
rank value of 22s =	1	0	0	0	0	0	0	0	0	1	0	173.5
rank value of 23s =	1	0	0	0	0	0	0	0	0	0	0	175
rank value of 24s =	1	0	0	0	0	0	0	1	0	0	1	177
rank value of 25s =	0	0	0	1	0	0	0	0	0	0	0	179
rank value of 26s =	0	0	0	0	0	0	0	0	0	1	0	180
rank value of 27s =	0	0	0	0	0	0	0	1	0	0	0	181
rank value of 28s =	0	0	0	0	0	0	0	0	1	0	0	182
rank value of 29s =	2	0	0	0	0	0	0	0	0	0	0	183.5
rank value of 30s =	0	0	0	1	0	0	0	0	0	0	0	185
rank value of 31s =	0	0	1	0	0	0	0	0	0	0	0	186
rank value of 35s =	0	0	0	0	0	0	0	0	0	1	0	187
rank value of 36.2s =	0	0	0	0	0	0	0	0	0	0	1	188
rank value of 40s =	0	0	0	0	0	0	0	0	1	0	0	189
rank value of 44s =	0	0	0	0	0	0	0	0	1	0	0	190
rank value of 46s =	0	0	0	0	0	0	0	0	0	1	0	191
rank value of 48s =	0	0	0	0	0	0	0	0	1	0	0	192
rank value of 49s =	0	0	0	0	0	0	0	0	0	1	0	193
rank value of 59s =	0	0	0	0	0	0	0	0	0	1	0	194
rank value of 68s =	0	0	0	0	0	0	0	0	0	1	0	195
rank value of 70s =	0	0	0	0	0	0	0	0	0	0	1	196
rank value of 74s =	1	0	0	0	0	0	0	0	0	0	0	197
rank value of 76s =	1	0	0	0	0	0	0	0	0	0	0	198
rank value of 78s =	0	0	0	0	0	0	0	0	0	1	0	199
rank value of 88s =	0	0	0	0	0	0	0	0	0	0	1	200
rank value of 90s =	0	0	0	1	0	0	0	0	0	0	0	201
rank value of 100s =	0	0	0	0	0	0	0	0	0	0	1	202
rank value of 110s =	0	0	0	0	0	0	0	0	0	0	1	203
rank value of 160s =	0	0	0	1	0	0	0	0	0	0	1	204.5
rank value of 170s =	0	0	0	0	0	0	0	0	0	0	1	206
rank value of 190s =	0	0	0	0	0	0	0	0	0	0	1	207
rank value of 330s =	0	0	0	0	0	1	0	0	0	0	0	208
rank value of 400s =	0	0	0	1	0	0	0	0	0	0	0	209
rank value of 430s =	0	0	0	0	0	0	0	0	0	0	1	210
rank value of 460s =	0	0	0	1	0	0	0	0	0	0	0	211
n =	**22**	**21**	**16**	**21**	**20**	**20**	**18**	**18**	**19**	**20**	**16**	

Sum of rank value calculations

139.5	697.5	325.5	232.5	372	651	604.5	279	465	418.5	93
0	0	0	0	0	0	93	0	0	0	0

0	0	94	0	0	0	0	0	0	0	0
0	0	0	0	96	0	0	0	192	0	0
0	0	0	0	0	0	0	98	0	0	0
0	0	0	0	0	0	99	0	0	0	0
100	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	101	0	0	0	0	0
0	0	0	0	0	0	102	0	0	0	0
0	0	0	104.5	0	104.5	0	0	104.5	104.5	0
0	0	0	0	0	0	0	107.5	0	107.5	0
0	0	0	0	109.5	0	109.5	0	0	0	0
0	0	0	111	0	0	0	0	0	0	0
112.5	0	0	0	0	0	0	0	112.5	0	0
0	114.5	0	0	114.5	0	0	0	0	0	0
0	0	0	116.5	116.5	0	0	0	0	0	0
118	0	0	0	0	0	0	0	0	0	0
0	239	0	0	0	0	0	0	0	0	0
121.5	0	0	0	121.5	0	0	0	0	0	0
0	0	0	0	123	0	0	0	0	0	0
0	0	0	0	0	250	0	0	0	0	125
0	0	127	0	0	0	0	0	0	0	0
0	0	128	0	0	0	0	0	0	0	0
0	0	129.5	0	0	129.5	0	0	0	0	0
0	0	0	131.5	0	0	0	0	0	0	131.5
0	0	0	0	0	0	0	0	0	0	133
134	0	0	0	0	0	0	0	0	0	0
0	0	0	135	0	0	0	0	0	0	0
0	0	0	0	0	0	0	136	0	0	0
0	276	0	138	0	0	0	0	0	0	0
0	140	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	141	0	0	0
0	0	0	0	142	0	0	0	0	0	0
0	0	0	0	143	0	0	0	0	0	0
0	0	0	0	144	0	0	0	0	0	0
0	0	0	145	0	0	0	0	0	0	0
0	0	0	0	0	0	0	146	0	0	0
148	0	0	0	148	0	0	148	0	0	0
0	0	150	0	0	0	0	0	0	0	0
0	0	0	151.5	0	0	0	0	151.5	0	0
0	0	0	0	153	0	0	0	0	0	0
0	0	0	0	0	0	0	309	0	0	0
313	0	0	0	0	0	0	0	0	0	0
317	0	0	0	0	0	0	0	0	0	0
0	0	0	160	0	0	0	0	0	0	0
0	0	161.5	161.5	0	0	0	0	0	0	0
0	0	0	0	163.5	0	0	163.5	0	0	0
166	0	0	0	0	0	0	166	0	0	166
0	0	168	0	0	0	0	0	0	0	0
169	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	170	0
0	0	171	0	0	0	0	0	0	0	0
0	0	0	0	0	0	172	0	0	0	0
173.5	0	0	0	0	0	0	0	0	173.5	0
175	0	0	0	0	0	0	0	0	0	0
177	0	0	0	0	0	0	177	0	0	177
0	0	0	179	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	180	0
0	0	0	0	0	0	0	181	0	0	0
0	0	0	0	0	0	0	0	182	0	0
367	0	0	0	0	0	0	0	0	0	0
0	0	0	185	0	0	0	0	0	0	0
0	0	186	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	187	0
0	0	0	0	0	0	0	0	0	0	188
0	0	0	0	0	0	0	0	189	0	0
0	0	0	0	0	0	0	0	190	0	0
0	0	0	0	0	0	0	0	0	191	0
0	0	0	0	0	0	0	0	192	0	0
0	0	0	0	0	0	0	0	0	193	0
0	0	0	0	0	0	0	0	0	194	0
0	0	0	0	0	0	0	0	0	195	0

	0	0	0	0	0	0	0	0	0	0	196
	197	0	0	0	0	0	0	0	0	0	0
	198	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	199	0
	0	0	0	0	0	0	0	0	0	0	200
	0	0	0	201	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	202
	0	0	0	0	0	0	0	0	0	0	203
	0	0	0	204.5	0	0	0	0	0	0	204.5
	0	0	0	0	0	0	0	0	0	0	206
	0	0	0	0	0	0	0	0	0	0	207
	0	0	0	0	0	208	0	0	0	0	0
	0	0	0	209	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	210
	0	0	0	211	0	0	0	0	0	0	0
sum of rank values (R_i)	**3126**	**1467**	**1640.5**	**2776.5**	**1946.5**	**1444**	**1180**	**2052**	**1778.5**	**2313**	**2642**

Compute the Kruskal-Wallis statistic:

$$H = \{[12/N(N+1)] * [S^{K}_{i=1} (R_i^2)/N_i]\} -3(N+1)$$

Well =	**Background**	**MW-1A**	**MW-2**	**MW-2D**	**MW-3**	**MW-3D**	**MW-4A**	**MW-8**	**MW-15**
Ri^2/N_i =	658585.1	367093	189443	104257	77356	233928	166477	267498	436260

$N_{i\,bg}$ = 59
N = 211
H = 34.90

Adjust H for ties:

T_i = 778908 sum of T1..T7

$H' = H/(1-(T_i/(N^3-N)))$
H' = 38.06
Chi-square = 15.51

Compare the calculated value H' to the tabulated Chi-square value with K-1 = # groups -1 = 17df at the 5% significance level from Table 1 of the IFG. The value is 15.51 which is less than H' =38.06.
Therefore, there is evidence of significant differences between the well groups.
Post-hoc pairwise comparisons are necessary (see below).

Calculate the critical values to compare each compliance well to the background wells:

Critical Value (C_x) = $P(N(N+1)/12)^{0.5} * (1/N_{i\,bg}+1/N_x)^{0.5}$
P = 2.33 Percentile of Standard Normal Distribution
from Table 4 of IFG
N = total sample size
$N_{i\,bg}$ = total samples (N_i) of background data
N_x = total samples (N_i) of well x

Difference between average ranks (Dx) = Rbar (well x) - avg Rbar (background)

Well =	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	**MW-15**
Rbar (well x) =	132.2	97.3	72.2	65.6	114.0	93.6	115.7	165.1
avg Rbar (background) =	105.7	105.7	105.7	105.7	105.7	105.7	105.7	105.7
Dx =	26.6	-8.3	-33.5	-40.1	8.3	-12.0	10.0	59.5
Cx =	36.1	36.8	36.8	38.3	38.3	37.5	36.8	40.1
Statistical Significance ?	No	No	No	No	No	No	No	**Yes**
If SSI, is current event above MCL?	-	-	-	-	-	-	-	No

Compare each difference (Dx) with the corresponding critical value (Cx).
The Dx value for the above indicated wells do exceed the corresponding Cx value.
Therefore, we conclude that the concentration of Total Nickel averaged over these compliance wells are significantly greater than that of the background wells.
Shewart-CUSUM Control Charts should be performed for each failing well to check for statistical significance.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J10-1957-20

Compound: **Total Nickel**
NC MCL (mg/l): 100
Method: Shewhart-CUSUM Control Chart

Part 1: Check for Normality

	MW-15	MDL
9/26/2002	**430**	**5**
4/28/2003	**70**	**5**
10/30/2003	**190**	**5**
4/20/2004	**110**	**5**
10/21/2004	**160**	**5**
4/18/2005	**170**	**5**
10/13/2005	**100**	**5**
4/25/2006	**88**	**50**
10/20/2006	**24**	**5**
4/25/2007	ND	**50**
10/31/2007	**36.2**	**5**
4/23/2008	**19**	**5**
10/20/2008	**8.5**	**5**
4/22/2009	NS	**5**
10/26/2009	**8.4**	**5**
4/22/2010	ND	**5**
10/27/2010	**7.5**	**5**

If not detected (ND), use half of the detection limit.

	X_i values =
430	39107087
70	-8702.093
190	983034.36
110	7336.7246
160	334707.12
170	501157.45
100	838.89532
88	-16.94984
24	-294992.7
25	-281897.2
36.2	-160711.9
19	-366581.3
8.5	-552756
8.4	-554779
2.5	-683070.4
7.5	-573209

X_{bar} = 90.56875
SD = 110.17519
N = 16
$1/NS_i(X_i-X_{bar})^3$ = 2341090.3
g_1 = 1.9284566

Since the Coefficient of Skewness of 1.93 is greater than 1.0, the real data appear to be significantly skewed.
Do not assume that the data follow a Normal distribution.
Perform the Skewness Test on the natural log of the values.

	X_i values =
ln = 6.0637852	12.707835
4.2484952	0.1392305
5.2470241	3.4898481
4.7004804	0.9134675
5.0751738	2.4330021
5.1357984	2.7770567
4.6051702	0.6698558
4.4773368	0.4170635
3.1780538	-0.168329
3.2188758	-0.133686
3.5890591	-0.002812
2.944439	-0.485143
2.1400662	-4.020686
2.1282317	-4.111127
0.9162907	-22.28075
2.014903	-5.046813

X_{bar} = 3.730199
SD = 1.4427685
N = 16
$1/NS_i(X_i-X_{bar})^3$ = -0.793874
g_1= 0.291209

Since the Coefficient of Skewness of 0.29 is less than 1.0, the data appear not to be significantly skewed. Proceed with further statistical tests using the log-transformed values shown above.

Part 2: Shewhart-CUSUM Control Chart

Date	MW-15	MDL	Data for Testing
9/26/2002	**430**	5	6.0637852
4/28/2003	**70**	5	4.2484952
10/30/2003	**190**	5	5.2470241
4/20/2004	**110**	5	4.7004804
10/21/2004	**160**	5	5.0751738
4/18/2005	**170**	5	5.1357984
10/13/2005	**100**	5	4.6051702
4/25/2006	**88**	50	4.4773368
10/20/2006	**24**	5	3.1780538
4/25/2007	ND	50	3.2188758
10/31/2007	**36.2**	5	3.5890591
4/23/2008	**19**	5	2.944439
10/20/2008	**8.5**	5	2.1400662
4/22/2009	NS	5	-
10/26/2009	**8.4**	5	2.1282317
4/22/2010	ND	5	0.9162907
10/27/2010	**7.5**	5	2.014903

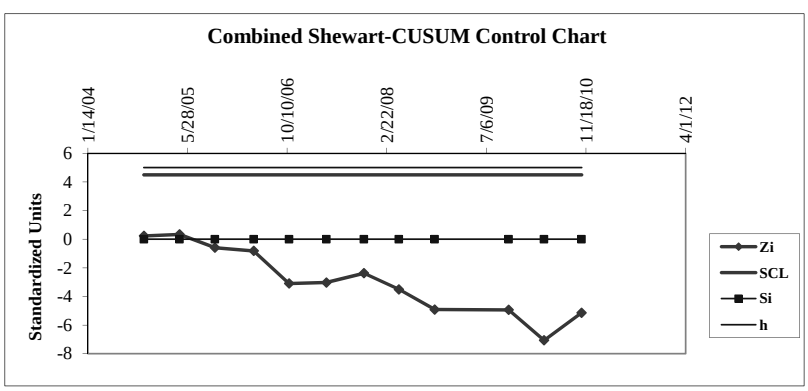
Compute the mean and standard deviation of the historical data:

4.944158 = x_{mean} (Mean of N1-N8 historical data)
0.5701309 = s (Standard Deviation of N1-N8 historical data)
1 = k (constant, reference value)
5 = h (constant, upper control limit for the CUSUM scheme)
4.5 = SCL (Constant, upper Shewhart Control Limit)

Compute the standardized mean (Z_i) and the cumulative sum (S_i) for each concentration.

Date	x_i	Z_i	S_i	h	SCL
			0		
10/21/2004	5.0751738	0.2297995	0	5	4.5
4/18/2005	5.1357984	0.3361341	0	5	4.5
10/13/2005	4.6051702	-0.594579	0	5	4.5
4/25/2006	4.4773368	-0.8187966	0	5	4.5
10/20/2006	3.1780538	-3.0977172	0	5	4.5
4/25/2007	3.2188758	-3.0261161	0	5	4.5
10/31/2007	3.5890591	-2.3768208	0	5	4.5
4/23/2008	2.944439	-3.5074738	0	5	4.5
10/20/2008	2.1400662	-4.9183303	0	5	4.5
10/26/2009	2.1282317	-4.9390877	0	5	4.5
4/22/2010	0.9162907	-7.0648119	0	5	4.5
10/27/2010	2.014903	-5.1378643	0	5	4.5

Plot Z_i and S_i versus time:



Compare the Z_i and S_i values to their respective control limits of SCL and h.
The limits were not exceeded and do not indicate statistically significant evidence of contamination at the site.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J10-1957-20

Compound: **Total Selenium**
MCL (mg/l): 50
Method: Poisson Prediction Limits
Background: MW-11S, MW-11D, & MW-14

	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MDL
04/24/00	ND	NS	NS	ND	ND	ND	ND	ND	ND	ND	NS	**20**
06/26/00	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	**20**
07/26/00	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	**20**
09/18/00	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	**20**
04/09/01	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	NS	**20**
09/18/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**20**
10/29/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**20**
01/30/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**20**
02/28/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**20**
04/15/02	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	NS	**20**
09/26/02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**20**
04/28/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**20**
10/30/03	ND	ND	NT	ND	ND	ND	ND	ND	ND	ND	ND	**5**
04/20/04	ND	ND	ND	ND	ND	**5**	ND	ND	ND	ND	ND	**5**
10/21/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
04/18/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
10/13/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
04/25/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**20**
10/20/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10**
04/25/07	**12**	ND	ND	ND	ND	**460**	ND	ND	ND	ND	**18**	**10**
10/31/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10**
04/23/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10**
10/20/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10**
04/22/09	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	**10**
10/26/09	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	**10**
04/22/10	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	**10**
10/27/10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10**

1) If not detected (ND), use half of the detection limit.

04/24/00	10	-	-	10	10	10	10	10	10	10	-
06/26/00	10	10	-	-	-	-	-	-	-	-	-
07/26/00	10	10	-	-	-	-	-	-	-	-	-
09/18/00	-	-	-	-	-	-	-	-	-	-	-
04/09/01	10	10	-	10	10	10	10	10	10	10	-
09/18/01	-	-	-	-	-	-	-	-	-	-	-
10/29/01	-	-	-	-	-	-	-	-	-	-	-
01/30/02	-	-	-	-	-	-	-	-	-	-	-
02/28/02	-	-	-	-	-	-	-	-	-	-	-
04/15/02	10	10	-	10	10	10	10	10	10	10	-
09/26/02	10	10	10	10	10	10	10	10	10	10	10
04/28/03	10	10	10	10	10	10	10	10	10	10	10
10/30/03	2.5	2.5	-	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
04/20/04	2.5	2.5	2.5	2.5	2.5	5	2.5	2.5	2.5	2.5	2.5
10/21/04	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
04/18/05	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
10/13/05	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
04/25/06	10	10	10	10	10	10	10	10	10	10	10
10/20/06	5	5	5	5	5	5	5	5	5	5	5
04/25/07	12	5	5	5	5	460	5	5	5	5	18
10/31/07	5	5	5	5	5	5	5	5	5	5	5
04/23/08	5	5	5	5	5	5	5	5	5	5	5
10/20/08	5	5	5	5	5	5	5	5	5	5	5
04/22/09	5	5	5	5	5	5	5	5	5	5	-
10/26/09	5	5	5	5	5	5	-	-	-	5	5
04/22/10	5	5	5	5	5	5	-	-	5	5	5
10/27/10				5	5	5	5	5	5	5	5

2) Set the total number of data values for background wells (through the previous sampling event) equal to 'n' = 21.
Use 1/2 of the method detection limit to calculate the Total Poisson Count of the Sum (T_n).

$n = 56$
$T_{n1} = 342$

3) Using Gibbons' formula, calculate the upper Poisson Prediction limit T^*_k:

$$T^*_k = cT_{n1} + ct^2/2 + ct[T_{n1}(1+1/c) + t^2/4]^{-0.5}$$

where $c = k/n$
and where k = the number of future predicted measurements (one per well during the current sampling event)
and where t = the upper 99th percentile of the t-distribution with (n-1) degrees of freedom (Table 6 of the IFG).

$k = 8$
$n = 56$
$T_{n1} = 342$
$t\,[55,.01] = 2.3983$
$c = 0.1429$
$T_{n2} = 40$
$T^*_k = 67.2$

4) Compare the *Poisson Prediction Limit* (T^*_k) to the *Sum of the Concentrations Detected* (T_{n2}) in the wells during the most recent sampling event.
Since the Poisson Prediction Limit was not exceeded, there is no evidence of contamination.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J10-1957-20

Compound: **Total Silver**
MCL (mg/l): 17.5
Method: Poisson Prediction Limits
Background: MW-11S, MW-11D, & MW-14

	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MDL
04/24/00	**3.7**	NS	NS	ND	ND	ND	**6.9**	ND	ND	ND	NS	**2**
06/26/00	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	**2**
07/26/00	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	**2**
09/18/00	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	**10**
04/09/01	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	NS	**2**
09/18/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**2**
10/29/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**2**
01/30/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**2**
02/28/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**10**
04/15/02	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	NS	**2**
09/26/02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2**
04/28/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2**
10/30/03	ND	ND	NT	ND	ND	ND	ND	ND	ND	ND	ND	**2**
04/20/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2**
10/21/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2**
04/18/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2**
10/13/05	**2.9**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2**
04/25/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10**
10/20/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
04/25/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10**
10/31/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
04/23/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
10/20/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
04/22/09	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	**5**
10/26/09	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	**5**
04/22/10	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	**5**
10/27/10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**

1) If not detected (ND), use half of the detection limit.

04/24/00	3.7	-	-	1	1	1	6.9	1	1	1	-
06/26/00	1	1	-	-	-	-	-	-	-	-	-
07/26/00	1	1	-	-	-	-	-	-	-	-	-
09/18/00	-	-	-	-	-	-	-	-	-	-	-
04/09/01	1	1	-	1	1	1	1	1	1	1	-
09/18/01	-	-	-	-	-	-	-	-	-	-	-
10/29/01	-	-	-	-	-	-	-	-	-	-	-
01/30/02	-	-	-	-	-	-	-	-	-	-	-
02/28/02	-	-	-	-	-	-	-	-	-	-	-
04/15/02	1	1	-	1	1	1	1	1	1	1	-
09/26/02	1	1	1	1	1	1	1	1	1	1	1
04/28/03	1	1	1	1	1	1	1	1	1	1	1
10/30/03	1	1	-	1	1	1	1	1	1	1	1
04/20/04	1	1	1	1	1	1	1	1	1	1	1
10/21/04	1	1	1	1	1	1	1	1	1	1	1
04/18/05	1	1	1	1	1	1	1	1	1	1	1
10/13/05	2.9	1	1	1	1	1	1	1	1	1	1
04/25/06	5	5	5	5	5	5	5	5	5	5	5
10/20/06	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
04/25/07	5	5	5	5	5	5	5	5	5	5	5
10/31/07	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
04/23/08	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
10/20/08	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
04/22/09	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	-
10/26/09	2.5	2.5	2.5	2.5	2.5	2.5	-	-	-	2.5	2.5
04/22/10	2.5	2.5	2.5	2.5	2.5	2.5	-	-	2.5	2.5	2.5
10/27/10				2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5

2) Set the total number of data values for background wells (through the previous sampling event) equal to 'n' = 21.
Use 1/2 of the method detection limit to calculate the Total Poisson Count of the Sum (T_n).

$n = 56$
$T_{n1} = 116.1$

3) Using Gibbons' formula, calculate the upper Poisson Prediction limit T^*_k:

$$T^*_k = cT_{n1} + ct^2/2 + ct[T_{n1}(1+1/c) + t^2/4]^{-0.5}$$

where $c = k/n$
and where k = the number of future predicted measurements (one per well during the current sampling event)
and where t = the upper 99th percentile of the t-distribution with (n-1) degrees of freedom (Table 6 of the IFG).

$k = 8$
$n = 56$
$T_{n1} = 116.1$
$t\,[55,.01] = 2.3983$
$c = 0.1429$
$T_{n2} = 20$
$T^*_k = 27.4$

4) Compare the *Poisson Prediction Limit* (T^*_k) to the *Sum of the Concentrations Detected* (T_{n2}) in the wells during the most recent sampling event.
Since the Poisson Prediction Limit was not exceeded, there is no evidence of contamination.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J10-1957-20

Compound: **Total Thallium**
MCL (mg/l): Not Established
Method: Poisson Prediction Limits
Background: MW-11S, MW-11D, & MW-14

	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MDL
04/24/00	**2**	NS	NS	ND	**3**	**2**	**4**	ND	**2**	**5**	NS	**2**
06/26/00	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	**2**
07/26/00	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	**2**
09/18/00	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	**20**
04/09/01	**40**	ND	NS	ND	ND	ND	ND	ND	ND	ND	NS	**2**
09/18/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**2**
10/29/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**2**
01/30/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**2**
02/28/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**20**
04/15/02	**40**	ND	NS	ND	ND	ND	ND	ND	ND	ND	NS	**2**
09/26/02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**65**	**2**
04/28/03	ND	ND	ND	**1.6**	ND	ND	ND	ND	**1.4**	ND	**15**	**1**
10/30/03	ND	ND	NT	ND	ND	ND	ND	ND	ND	ND	ND	**10**
04/20/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10**
10/21/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10**
04/18/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10**
10/13/05	**22**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10**
04/25/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10**
10/20/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10**
04/25/07	ND	ND	ND	ND	ND	**35**	ND	ND	ND	ND	ND	**5.5**
10/31/07	**11.6**	ND	ND	ND	ND	ND	ND	ND	ND	**9.5**	ND	**5.5**
04/23/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5.5**
10/20/08	**7.2**	ND	ND	ND	ND	ND	ND	**6.1**	ND	ND	ND	**5.4**
04/22/09	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	**5.4**
10/26/09	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	**5.4**
04/22/10	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	**5.4**
10/27/10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5.4**

1) If not detected (ND), use half of the detection limit.

04/24/00	2	-	-	1	3	2	4	1	2	5	-
06/26/00	1	1	-	-	-	-	-	-	-	-	-
07/26/00	1	1	-	-	-	-	-	-	-	-	-
09/18/00	-	-	-	-	-	-	-	-	-	-	-
04/09/01	40	1	-	1	1	1	1	1	1	1	-
09/18/01	-	-	-	-	-	-	-	-	-	-	-
10/29/01	-	-	-	-	-	-	-	-	-	-	-
01/30/02	-	-	-	-	-	-	-	-	-	-	-
02/28/02	-	-	-	-	-	-	-	-	-	-	-
04/15/02	40	1	-	1	1	1	1	1	1	1	-
09/26/02	1	1	1	1	1	1	1	1	1	1	65
04/28/03	0.5	0.5	0.5	1.6	0.5	0.5	0.5	0.5	1.4	0.5	15
10/30/03	5	5	-	5	5	5	5	5	5	5	5
04/20/04	5	5	5	5	5	5	5	5	5	5	5
10/21/04	5	5	5	5	5	5	5	5	5	5	5
04/18/05	5	5	5	5	5	5	5	5	5	5	5
10/13/05	22	5	5	5	5	5	5	5	5	5	5
04/25/06	5	5	5	5	5	5	5	5	5	5	5
10/20/06	5	5	5	5	5	5	5	5	5	5	5
04/25/07	2.75	2.75	2.75	2.75	2.75	35	2.75	2.75	2.75	2.75	2.75
10/31/07	11.6	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	9.5	2.75
04/23/08	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75
10/20/08	7.2	2.7	2.7	2.7	2.7	2.7	2.7	6.1	2.7	2.7	2.7
04/22/09	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	-
10/26/09	2.7	2.7	2.7	2.7	2.7	2.7	-	-	-	2.7	2.7
04/22/10	2.7	2.7	2.7	2.7	2.7	2.7	-	-	2.7	2.7	2.7
10/27/10				2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7

2) Set the total number of data values for background wells (through the previous sampling event) equal to 'n' = 21.
Use 1/2 of the method detection limit to calculate the Total Poisson Count of the Sum (T_n).

$n = 56$
$T_{n1} = 280$

3) Using Gibbons' formula, calculate the upper Poisson Prediction limit T^*_k:

$$T^*_k = cT_{n1} + ct^2/2 + ct[T_{n1}(1+1/c) + t^2/4]^{-0.5}$$

where $c = k/n$
and where k = the number of future predicted measurements (one per well during the current sampling event)
and where t = the upper 99th percentile of the t-distribution with (n-1) degrees of freedom (Table 6 of the IFG).

$k = 8$
$n = 56$
$T_{n1} = 280$
$t\,[55,.01] = 2.3983$
$c = 0.1429$
$T_{n2} = 21.6$
$T^*_k = 56.6$

4) Compare the *Poisson Prediction Limit* (T^*_k) to the *Sum of the Concentrations Detected* (T_{n2}) in the wells during the most recent sampling event.
Since the Poisson Prediction Limit was not exceeded, there is no evidence of contamination.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J10-1957-20

Compound: **Total Vanadium**
NC MCL (mg/l): Not Established
Method: Kruskal-Wallis
Background: MW-11S, MW-11D, & MW-14

	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MDL
04/24/00	17	NS	NS	19	32	21	ND	29	8.9	78	NS	5
06/26/00	40	6.3	NS	NS	NS	NS	NS	NS	NS	NS	NS	5
07/26/00	45	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	5
09/18/00	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	40
04/09/01	250	1.4	NS	13	19	9.3	ND	24	41	230	NS	5
09/18/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	5
10/29/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	5
01/30/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	5
02/28/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	40
04/15/02	240	ND	NS	ND	ND	11	21	14	69	260	NS	5
09/26/02	58	16	44	640	ND	ND	ND	42	50	310	1000	5
04/28/03	89	ND	9.6	170	6.8	6.8	ND	ND	37	230	130	5
10/30/03	54	ND	NT	6.6	16	ND	ND	ND	92	14	200	5
04/20/04	55	ND	ND	45	25	ND	ND	13	5.1	240	88	5
10/21/04	41	ND	ND	18	ND	ND	ND	ND	ND	160	210	5
04/18/05	85	ND	ND	680	5.4	ND	ND	ND	ND	240	110	5
10/13/05	82	ND	ND	210	8.9	ND	ND	ND	ND	170	82	5
04/25/06	110	ND	ND	ND	ND	ND	ND	ND	ND	120	85	40
10/20/06	79	ND	ND	28	ND	ND	ND	ND	23	ND	30	5
04/25/07	43	ND	ND	ND	ND	300	ND	ND	ND	ND	26	25
10/31/07	89	ND	8.8	14.7	20	ND	ND	ND	8.6	103	48.2	5
04/23/08	26.1	ND	11.4	9.7	10.1	ND	ND	5.1	9.7	10	23.1	5
10/20/08	79	ND	15.1	15.8	ND	ND	ND	ND	5.4	ND	14.8	5
04/22/09	16	ND	32.7	19.8	7.7	ND	ND	ND	13.3	ND	NS	5
10/26/09	17.9	ND	ND	5.3	33.6	ND	NS	NS	NS	12.2	11.9	5
04/22/10	27.9	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	5
10/27/10	17.4	ND	ND	6.9	ND	ND	14.2	7.1	ND	ND	5.9	5
N_i	22	21	16	20	20	20	18	18	19	20	16	
sum of rank values (R_i)	3738.5	1222.0	1305.0	2589.0	1896.0	1434.0	1062.5	1478.5	2028.5	2827.0	2574.0	
avg rank value (Rbar)	169.9	58.2	81.6	129.5	94.8	71.7	59.0	82.1	106.8	141.4	160.9	

	Number of each rank value											Rank Value
rank value of NDs =	0	18	10	4	9	15	16	11	7	6	1	49
rank value of 1.4s =	0	1	0	0	0	0	0	0	0	0	0	98
rank value of 5.1s =	0	0	0	0	0	0	0	1	1	0	0	99.5
rank value of 5.3s =	0	0	0	1	0	0	0	0	0	0	0	101
rank value of 5.4s =	0	0	0	0	1	0	0	0	1	0	0	102.5
rank value of 5.9s =	0	0	0	0	0	0	0	0	0	0	1	104
rank value of 6.3s =	0	1	0	0	0	0	0	0	0	0	0	105
rank value of 6.6s =	0	0	0	1	0	0	0	0	0	0	0	106
rank value of 6.8s =	0	0	0	0	1	1	0	0	0	0	0	107.5
rank value of 6.9s =	0	0	0	1	0	0	0	0	0	0	0	109
rank value of 7.1s =	0	0	0	0	0	0	0	1	0	0	0	110
rank value of 7.7s =	0	0	0	0	1	0	0	0	0	0	0	111
rank value of 8.6s =	0	0	0	0	0	0	0	0	1	0	0	112
rank value of 8.8s =	0	0	1	0	0	0	0	0	0	0	0	113
rank value of 8.9s =	0	0	0	0	1	0	0	0	1	0	0	114.5
rank value of 9.3s =	0	0	0	0	0	1	0	0	0	0	0	116
rank value of 9.6s =	0	0	1	0	0	0	0	0	0	0	0	117
rank value of 9.7s =	0	0	0	1	0	0	0	0	1	0	0	118.5
rank value of 10s =	0	0	0	0	0	0	0	0	0	1	0	120
rank value of 10.1s =	0	0	0	0	1	0	0	0	0	0	0	121
rank value of 11s =	0	0	0	0	0	1	0	0	0	0	0	122
rank value of 11.4s =	0	0	1	0	0	0	0	0	0	0	0	123
rank value of 11.9s =	0	0	0	0	0	0	0	0	0	0	1	124
rank value of 12.2s =	0	0	0	0	0	0	0	0	0	1	0	125
rank value of 13s =	0	0	0	1	0	0	0	1	0	0	0	126.5
rank value of 13.3s =	0	0	0	0	0	0	0	0	1	0	0	128
rank value of 14s =	0	0	0	0	0	0	0	1	0	1	0	129.5

rank value of 14.2s =	0	0	0	0	0	0	1	0	0	0	0	131
rank value of 14.7s =	0	0	0	1	0	0	0	0	0	0	0	132
rank value of 14.8s =	0	0	0	0	0	0	0	0	0	0	1	133
rank value of 15.1s =	0	0	1	0	0	0	0	0	0	0	0	134
rank value of 15.8s =	0	0	0	1	0	0	0	0	0	0	0	135
rank value of 16s =	1	1	0	0	1	0	0	0	0	0	0	137
rank value of 17s =	1	0	0	0	0	0	0	0	0	0	0	139
rank value of 17.4s =	1	0	0	0	0	0	0	0	0	0	0	140
rank value of 17.9s =	1	0	0	0	0	0	0	0	0	0	0	141
rank value of 18s =	0	0	0	1	0	0	0	0	0	0	0	142
rank value of 19s =	0	0	0	1	1	0	0	0	0	0	0	143.5
rank value of 19.8s =	0	0	0	1	0	0	0	0	0	0	0	145
rank value of 20s =	0	0	0	0	1	0	0	0	0	0	0	146
rank value of 21s =	0	0	0	0	0	1	1	0	0	0	0	147.5
rank value of 23s =	0	0	0	0	0	0	0	0	1	0	0	149
rank value of 23.1s =	0	0	0	0	0	0	0	0	0	0	1	150
rank value of 24s =	0	0	0	0	0	0	0	1	0	0	0	151
rank value of 25s =	0	0	0	0	1	0	0	0	0	0	0	152
rank value of 26s =	0	0	0	0	0	0	0	0	0	0	1	153
rank value of 26.1s =	1	0	0	0	0	0	0	0	0	0	0	154
rank value of 27.9s =	1	0	0	0	0	0	0	0	0	0	0	155
rank value of 28s =	0	0	0	1	0	0	0	0	0	0	0	156
rank value of 29s =	0	0	0	0	0	0	0	1	0	0	0	157
rank value of 30s =	0	0	0	0	0	0	0	0	0	0	1	158
rank value of 32s =	0	0	0	0	1	0	0	0	0	0	0	159
rank value of 32.7s =	0	0	1	0	0	0	0	0	0	0	0	160
rank value of 33.6s =	0	0	0	0	1	0	0	0	0	0	0	161
rank value of 37s =	0	0	0	0	0	0	0	0	1	0	0	162
rank value of 40s =	1	0	0	0	0	0	0	0	0	0	0	163
rank value of 41s =	1	0	0	0	0	0	0	0	1	0	0	164.5
rank value of 42s =	0	0	0	0	0	0	0	1	0	0	0	166
rank value of 43s =	1	0	0	0	0	0	0	0	0	0	0	167
rank value of 44s =	0	0	1	0	0	0	0	0	0	0	0	168
rank value of 45s =	1	0	0	1	0	0	0	0	0	0	0	169.5
rank value of 48.2s =	0	0	0	0	0	0	0	0	0	0	1	171
rank value of 50s =	0	0	0	0	0	0	0	0	1	0	0	172
rank value of 54s =	1	0	0	0	0	0	0	0	0	0	0	173
rank value of 55s =	1	0	0	0	0	0	0	0	0	0	0	174
rank value of 58s =	1	0	0	0	0	0	0	0	0	0	0	175
rank value of 69s =	0	0	0	0	0	0	0	0	1	0	0	176
rank value of 78s =	0	0	0	0	0	0	0	0	0	1	0	177
rank value of 79s =	2	0	0	0	0	0	0	0	0	0	0	178.5
rank value of 82s =	1	0	0	0	0	0	0	0	0	0	1	180.5
rank value of 85s =	1	0	0	0	0	0	0	0	0	0	1	182.5
rank value of 88s =	0	0	0	0	0	0	0	0	0	0	1	184
rank value of 89s =	2	0	0	0	0	0	0	0	0	0	0	185.5
rank value of 92s =	0	0	0	0	0	0	0	0	1	0	0	187
rank value of 103s =	0	0	0	0	0	0	0	0	0	1	0	188
rank value of 110s =	1	0	0	0	0	0	0	0	0	0	1	189.5
rank value of 120s =	0	0	0	0	0	0	0	0	0	1	0	191
rank value of 130s =	0	0	0	0	0	0	0	0	0	0	1	192
rank value of 160s =	0	0	0	0	0	0	0	0	0	1	0	193
rank value of 170s =	0	0	0	1	0	0	0	0	0	1	0	194.5
rank value of 200s =	0	0	0	0	0	0	0	0	0	0	1	196
rank value of 210s =	0	0	0	1	0	0	0	0	0	0	1	197.5
rank value of 230s =	0	0	0	0	0	0	0	0	0	2	0	199.5
rank value of 240s =	1	0	0	0	0	0	0	0	0	2	0	202
rank value of 250s =	1	0	0	0	0	0	0	0	0	0	0	204
rank value of 260s =	0	0	0	0	0	0	0	0	0	1	0	205
rank value of 300s =	0	0	0	0	0	1	0	0	0	0	0	206
rank value of 310s =	0	0	0	0	0	0	0	0	0	1	0	207
rank value of 640s =	0	0	0	1	0	0	0	0	0	0	0	208
rank value of 680s =	0	0	0	1	0	0	0	0	0	0	0	209
rank value of 1000s =	0	0	0	0	0	0	0	0	0	0	1	210
n =	**22**	**21**	**16**	**20**	**20**	**20**	**18**	**18**	**19**	**20**	**16**	

Sum of rank value calculations

0	882	490	196	441	735	784	539	343	294	49
0	98	0	0	0	0	0	0	0	0	0

0	0	0	0	0	0	0	99.5	99.5	0	0
0	0	0	101	0	0	0	0	0	0	0
0	0	0	0	102.5	0	0	0	102.5	0	0
0	0	0	0	0	0	0	0	0	0	104
0	105	0	0	0	0	0	0	0	0	0
0	0	0	106	0	0	0	0	0	0	0
0	0	0	0	107.5	107.5	0	0	0	0	0
0	0	0	109	0	0	0	0	0	0	0
0	0	0	0	0	0	0	110	0	0	0
0	0	0	0	111	0	0	0	0	0	0
0	0	0	0	0	0	0	0	112	0	0
0	0	113	0	0	0	0	0	0	0	0
0	0	0	0	114.5	0	0	0	114.5	0	0
0	0	0	0	0	116	0	0	0	0	0
0	0	117	0	0	0	0	0	0	0	0
0	0	0	118.5	0	0	0	0	118.5	0	0
0	0	0	0	0	0	0	0	0	120	0
0	0	0	0	121	0	0	0	0	0	0
0	0	0	0	0	122	0	0	0	0	0
0	0	123	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	124
0	0	0	0	0	0	0	0	0	125	0
0	0	0	126.5	0	0	0	126.5	0	0	0
0	0	0	0	0	0	0	0	128	0	0
0	0	0	0	0	0	0	129.5	0	129.5	0
0	0	0	0	0	0	131	0	0	0	0
0	0	0	132	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	133
0	0	134	0	0	0	0	0	0	0	0
0	0	0	135	0	0	0	0	0	0	0
137	137	0	0	137	0	0	0	0	0	0
139	0	0	0	0	0	0	0	0	0	0
140	0	0	0	0	0	0	0	0	0	0
141	0	0	0	0	0	0	0	0	0	0
0	0	0	142	0	0	0	0	0	0	0
0	0	0	143.5	143.5	0	0	0	0	0	0
0	0	0	145	0	0	0	0	0	0	0
0	0	0	0	146	0	0	0	0	0	0
0	0	0	0	0	147.5	147.5	0	0	0	0
0	0	0	0	0	0	0	0	149	0	0
0	0	0	0	0	0	0	0	0	0	150
0	0	0	0	0	0	0	151	0	0	0
0	0	0	0	152	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	153
154	0	0	0	0	0	0	0	0	0	0
155	0	0	0	0	0	0	0	0	0	0
0	0	0	156	0	0	0	0	0	0	0
0	0	0	0	0	0	0	157	0	0	0
0	0	0	0	0	0	0	0	0	0	158
0	0	0	0	159	0	0	0	0	0	0
0	0	160	0	0	0	0	0	0	0	0
0	0	0	0	161	0	0	0	0	0	0
0	0	0	0	0	0	0	0	162	0	0
163	0	0	0	0	0	0	0	0	0	0
164.5	0	0	0	0	0	0	0	164.5	0	0
0	0	0	0	0	0	0	166	0	0	0
167	0	0	0	0	0	0	0	0	0	0
0	0	168	0	0	0	0	0	0	0	0
169.5	0	0	169.5	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	171
0	0	0	0	0	0	0	0	172	0	0
173	0	0	0	0	0	0	0	0	0	0
174	0	0	0	0	0	0	0	0	0	0
175	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	176	0	0
0	0	0	0	0	0	0	0	0	177	0
357	0	0	0	0	0	0	0	0	0	0
180.5	0	0	0	0	0	0	0	0	0	180.5
182.5	0	0	0	0	0	0	0	0	0	182.5
0	0	0	0	0	0	0	0	0	0	184
371	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	187	0	0

	0	0	0	0	0	0	0	0	0	188	0
	189.5	0	0	0	0	0	0	0	0	0	189.5
	0	0	0	0	0	0	0	0	0	191	0
	0	0	0	0	0	0	0	0	0	0	192
	0	0	0	0	0	0	0	0	0	193	0
	0	0	0	194.5	0	0	0	0	0	194.5	0
	0	0	0	0	0	0	0	0	0	0	196
	0	0	0	197.5	0	0	0	0	0	0	197.5
	0	0	0	0	0	0	0	0	0	399	0
	202	0	0	0	0	0	0	0	0	404	0
	204	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	205	0
	0	0	0	0	0	206	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	207	0
	0	0	0	208	0	0	0	0	0	0	0
	0	0	0	209	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	210
sum of rank values (R_i)	**3738.5**	**1222**	**1305**	**2589**	**1896**	**1434**	**1062.5**	**1478.5**	**2028.5**	**2827**	**2574**

Compute the Kruskal-Wallis statistic:

$$H = \{[12/N(N+1)] * [\ S^{K}_{i=1}\ (R_i^2)/N_i]\} -3(N+1)$$

Well =	**Background**	**MW-1A**	**MW-2**	**MW-2D**	**MW-3**	**MW-3D**	**MW-4A**	**MW-8**	**MW-15**
Ri^2/N_i =	665364.2	335146	179741	102818	62717	121442	216569	399596	414092

$N_{i\,bg}$ = 59
N = 210
H = 43.37

Adjust H for ties:

T_i = 912738 sum of T1..T5

$H' = H/(1-(T_i/(N^3-N)))$
H' = 48.11
Chi-square = 15.51

Compare the calculated value H' to the tabulated Chi-square value with K-1 = # groups -1 = 17df at the 5% significance level from Table 1 of the IFG. The value is 15.51 which is less than H' =48.11.
Therefore, there is evidence of significant differences between the well groups.
Post-hoc pairwise comparisons are necessary (see below).

Calculate the critical values to compare each compliance well to the background wells:

Critical Value (C_x) = $P(N(N+1)/12)^{0.5} * (1/N_{i\,bg}+1/N_x)^{0.5}$
P = 2.33 Percentile of Standard Normal Distribution
from Table 4 of IFG
N = total sample size
$N_{i\,bg}$ = total samples (N_i) of background data
N_x = total samples (N_i) of well x

Difference between average ranks (Dx) = Rbar (well x) - avg Rbar (background)

Well =	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	**MW-15**
Rbar (well x) =	129.5	94.8	71.7	59.0	82.1	106.8	141.4	160.9
avg Rbar (background) =	106.2	106.2	106.2	106.2	106.2	106.2	106.2	106.2
Dx =	23.3	-11.4	-34.5	-47.2	-24.1	0.6	35.2	54.7
Cx =	36.6	36.6	36.6	38.1	38.1	37.3	36.6	39.9
Statistical Significance ?	No	No	No	No	No	No	No	**Yes**
If SSI, is current event above MCL?	-	-	-	-	-	-	-	NE

Compare each difference (Dx) with the corresponding critical value (Cx).
The Dx value for the above indicated wells do exceed the corresponding Cx value.
Therefore, we conclude that the concentration of Total Vanadium averaged over these compliance wells are significantly greater than that of the background wells.
Shewart-CUSUM Control Charts should be performed for each failing well to check for statistical significance.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J10-1957-20

Compound: **Total Vanadium**
NC MCL (mg/l): Not Established
Method: Shewhart-CUSUM Control Chart

Part 1: Check for Normality

	MW-15	MDL
9/26/2002	**1000**	**5**
4/28/2003	**130**	**5**
10/30/2003	**200**	**5**
4/20/2004	**88**	**5**
10/21/2004	**210**	**5**
4/18/2005	**110**	**5**
10/13/2005	**82**	**5**
4/25/2006	**85**	**40**
10/20/2006	**30**	**5**
4/25/2007	**26**	**25**
10/31/2007	**48.2**	**5**
4/23/2008	**23.1**	**5**
10/20/2008	**14.8**	**5**
4/22/2009	NS	**5**
10/26/2009	**11.9**	**5**
4/22/2010	ND	**5**
10/27/2010	**5.9**	**5**

If not detected (ND), use half of the detection limit.

1000	X_i values =	660292795
130		0.488373
200		354706.97
88		-69998.2
210		527269.33
110		-7091.721
82		-105237.6
85		-86424.17
30		-976560.6
26		-1099504
48.2		-531687.1
23.1		-1194812
14.8		-1497685
11.9		-1614481
2.5		-2034503
5.9		-1875087

X_{bar} = 129.2125
SD = 241.17679
N = 16
$1/NS_i(X_i-X_{bar})^3$ = 40630106
g_1 = 3.1906894

Since the Coefficient of Skewness of 3.19 is greater than 1.0, the real data appear to be significantly skewed.
Do not assume that the data follow a Normal distribution.
Perform the Skewness Test on the natural log of the values.

ln =	6.9077553	X_i values = 27.920311
	4.8675345	0.9805811
	5.2983174	2.8891811
	4.4773368	0.2195695
	5.3471075	3.1963867
	4.7004804	0.5644418
	4.4067192	0.1511379
	4.4426513	0.1838332
	3.4011974	-0.105725
	3.2580965	-0.233692
	3.875359	2.244E-09
	3.1398326	-0.395798
	2.6946272	-1.640621
	2.4765384	-2.729393
	0.9162907	-25.87548
	1.7749524	-9.249064

X_{bar} = 3.8740498
SD = 1.4985214
N = 16
$1/NS_l(X_i-X_{bar})^3$ = -0.257771
g_1 = 0.0843893

Since the Coefficient of Skewness of 0.08 is less than 1.0, the data appear not to be significantly skewed. Proceed with further statistical tests using the log-transformed values shown above.

Part 2: Shewhart-CUSUM Control Chart

Date	MW-15	MDL	Data for Testing
9/26/2002	**1000**	5	6.9077553
4/28/2003	**130**	5	4.8675345
10/30/2003	**200**	5	5.2983174
4/20/2004	**88**	5	4.4773368
10/21/2004	**210**	5	5.3471075
4/18/2005	**110**	5	4.7004804
10/13/2005	**82**	5	4.4067192
4/25/2006	**85**	40	4.4426513
10/20/2006	**30**	5	3.4011974
4/25/2007	**26**	25	3.2580965
10/31/2007	**48.2**	5	3.875359
4/23/2008	**23.1**	5	3.1398326
10/20/2008	**14.8**	5	2.6946272
4/22/2009	NS	5	-
10/26/2009	**11.9**	5	2.4765384
4/22/2010	ND	5	0.9162907
10/27/2010	**5.9**	5	1.7749524

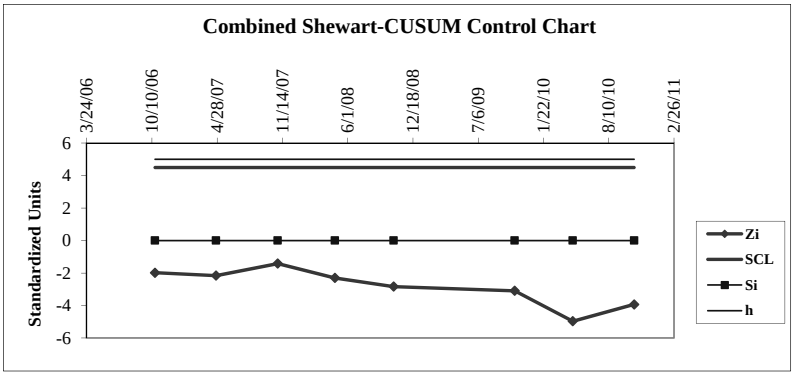
Compute the mean and standard deviation of the historical data:

5.0559878 = x_{mean} (Mean of N1-N8 historical data)
0.8338367 = s (Standard Deviation of N1-N8 historical data)
1 = k (constant, reference value)
5 = h (constant, upper control limit for the CUSUM scheme)
4.5 = SCL (Constant, upper Shewhart Control Limit)

Compute the standardized mean (Z_i) and the cumulative sum (S_i) for each concentration.

Date	x_i	Z_i	S_i	h	SCL
			0		
10/20/2006	3.4011974	-1.9845497	0	5	4.5
4/25/2007	3.2580965	-2.1561671	0	5	4.5
10/31/2007	3.875359	-1.4158992	0	5	4.5
4/23/2008	3.1398326	-2.2979981	0	5	4.5
10/20/2008	2.6946272	-2.8319221	0	5	4.5
10/26/2009	2.4765384	-3.0934706	0	5	4.5
4/22/2010	0.9162907	-4.9646376	0	5	4.5
10/27/2010	1.7749524	-3.9348656	0	5	4.5

Plot Z_i and S_i versus time:



Compare the Z_i and S_i values to their respective control limits of SCL and h.
The limits were not exceeded and do not indicate statistically significant evidence of contamination at the site.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J10-1957-20

Compound: **Total Zinc**
NC MCL (mg/l): 1050
Method: Kruskal-Wallis
Background: MW-11S, MW-11D, & MW-14

	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MDL
04/24/00	150	NS	NS	35	48	36	12	43	28	68	NS	10
06/26/00	37	12	NS	NS	NS	NS	NS	NS	NS	NS	NS	10
07/26/00	65	66	NS	NS	NS	NS	NS	NS	NS	NS	NS	10
09/18/00	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	50
04/09/01	230	130	NS	12	24	18	17	33	75	200	NS	10
09/18/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	10
10/29/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	10
01/30/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	10
02/28/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	50
04/15/02	230	16	NS	ND	ND	13	33	38	120	230	NS	10
09/26/02	57	120	110	580	ND	20	ND	56	250	280	4800	10
04/28/03	86	14	31	160	16	ND	ND	ND	81	190	800	10
10/30/03	55	22	NT	17	26	10	ND	ND	140	26	1800	10
04/20/04	55	10	ND	44	30	11	14	19	23	220	770	10
10/21/04	29	ND	ND	17	ND	14	ND	12	15	70	1200	10
04/18/05	83	ND	ND	780	ND	30	13	10	ND	240	1200	10
10/13/05	92	13	12	230	19	25	ND	ND	14	170	800	10
04/25/06	130	ND	88	ND	ND	ND	ND	ND	110	120	780	50
10/20/06	74	ND	20	37	ND	ND	ND	ND	55	ND	200	10
04/25/07	55	21	30	30	22	830	22	15	10	12	200	10
10/31/07	86	ND	66.2	14	37.4	33.3	12	ND	11.6	91.1	336	10
04/23/08	27.3	ND	50.3	12.2	24.4	36.9	ND	10.3	17.5	38.8	138	10
10/20/08	66.5	19.9	59.2	15.3	10.6	29.1	ND	12.4	ND	17.4	71.5	10
04/22/09	23.1	43.5	99.9	25.3	17.9	17.6	10.5	ND	35.2	ND	NS	10
10/26/09	19.6	ND	14.8	ND	37.8	ND	NS	NS	NS	ND	63.8	10
04/22/10	22.2	14.2	ND	ND	ND	ND	NS	NS	ND	ND	24.6	10
10/27/10	19.1	ND	12.3	15	ND	ND	32.4	16.3	ND	ND	60.7	10
N_i	22	21	16	20	20	20	18	18	19	20	16	
sum of rank values (R_i)	3332.5	1660.5	1681.5	2136.0	1586.0	1725.5	1068.5	1303.5	2081.5	2581.0	2998.5	
avg rank value (Rbar)	151.5	79.1	105.1	106.8	79.3	86.3	59.4	72.4	109.6	129.1	187.4	

	Number of each rank value											Rank Value
rank value of NDs =	0	8	4	4	8	6	9	7	4	5	0	28
rank value of 10s =	0	1	0	0	0	1	0	1	1	0	0	57.5
rank value of 10.3s =	0	0	0	0	0	0	0	1	0	0	0	60
rank value of 10.5s =	0	0	0	0	0	0	1	0	0	0	0	61
rank value of 10.6s =	0	0	0	0	1	0	0	0	0	0	0	62
rank value of 11s =	0	0	0	0	0	1	0	0	0	0	0	63
rank value of 11.6s =	0	0	0	0	0	0	0	0	1	0	0	64
rank value of 12s =	0	1	1	1	0	0	2	1	0	1	0	68
rank value of 12.2s =	0	0	0	1	0	0	0	0	0	0	0	72
rank value of 12.3s =	0	0	1	0	0	0	0	0	0	0	0	73
rank value of 12.4s =	0	0	0	0	0	0	0	1	0	0	0	74
rank value of 13s =	0	1	0	0	0	1	1	0	0	0	0	76
rank value of 14s =	0	1	0	1	0	1	1	0	1	0	0	80
rank value of 14.2s =	0	1	0	0	0	0	0	0	0	0	0	83
rank value of 14.8s =	0	0	1	0	0	0	0	0	0	0	0	84
rank value of 15s =	0	0	0	1	0	0	0	1	1	0	0	86
rank value of 15.3s =	0	0	0	1	0	0	0	0	0	0	0	88
rank value of 16s =	0	1	0	0	1	0	0	0	0	0	0	89.5
rank value of 16.3s =	0	0	0	0	0	0	0	1	0	0	0	91
rank value of 17s =	0	0	0	2	0	0	1	0	0	0	0	93
rank value of 17.4s =	0	0	0	0	0	0	0	0	0	1	0	95
rank value of 17.5s =	0	0	0	0	0	0	0	0	1	0	0	96
rank value of 17.6s =	0	0	0	0	0	1	0	0	0	0	0	97
rank value of 17.9s =	0	0	0	0	1	0	0	0	0	0	0	98
rank value of 18s =	0	0	0	0	0	1	0	0	0	0	0	99
rank value of 19s =	0	0	0	0	1	0	0	1	0	0	0	100.5
rank value of 19.1s =	1	0	0	0	0	0	0	0	0	0	0	102
rank value of 19.6s =	1	0	0	0	0	0	0	0	0	0	0	103
rank value of 19.9s =	0	1	0	0	0	0	0	0	0	0	0	104
rank value of 20s =	0	0	1	0	0	1	0	0	0	0	0	105.5
rank value of 21s =	0	1	0	0	0	0	0	0	0	0	0	107
rank value of 22s =	0	1	0	0	1	0	1	0	0	0	0	109
rank value of 22.2s =	1	0	0	0	0	0	0	0	0	0	0	111
rank value of 23s =	0	0	0	0	0	0	0	0	1	0	0	112
rank value of 23.1s =	1	0	0	0	0	0	0	0	0	0	0	113
rank value of 24s =	0	0	0	0	1	0	0	0	0	0	0	114
rank value of 24.4s =	0	0	0	0	1	0	0	0	0	0	0	115
rank value of 24.6s =	0	0	0	0	0	0	0	0	0	0	1	116
rank value of 25s =	0	0	0	0	0	1	0	0	0	0	0	117
rank value of 25.3s =	0	0	0	1	0	0	0	0	0	0	0	118

rank value of 26s =	0	0	0	0	1	0	0	0	0	1	0	119.5
rank value of 27.3s =	1	0	0	0	0	0	0	0	0	0	0	121
rank value of 28s =	0	0	0	0	0	0	0	0	1	0	0	122
rank value of 29s =	1	0	0	0	0	0	0	0	0	0	0	123
rank value of 29.1s =	0	0	0	0	0	1	0	0	0	0	0	124
rank value of 30s =	0	0	1	1	1	1	0	0	0	0	0	126.5
rank value of 31s =	0	0	1	0	0	0	0	0	0	0	0	129
rank value of 32.4s =	0	0	0	0	0	0	1	0	0	0	0	130
rank value of 33s =	0	0	0	0	0	0	1	1	0	0	0	131.5
rank value of 33.3s =	0	0	0	0	0	1	0	0	0	0	0	133
rank value of 35s =	0	0	0	1	0	0	0	0	0	0	0	134
rank value of 35.2s =	0	0	0	0	0	0	0	0	1	0	0	135
rank value of 36s =	0	0	0	0	0	1	0	0	0	0	0	136
rank value of 36.9s =	0	0	0	0	0	1	0	0	0	0	0	137
rank value of 37s =	1	0	0	1	0	0	0	0	0	0	0	138.5
rank value of 37.4s =	0	0	0	0	1	0	0	0	0	0	0	140
rank value of 37.8s =	0	0	0	0	1	0	0	0	0	0	0	141
rank value of 38s =	0	0	0	0	0	0	0	1	0	0	0	142
rank value of 38.8s =	0	0	0	0	0	0	0	0	0	1	0	143
rank value of 43s =	0	0	0	0	0	0	0	1	0	0	0	144
rank value of 43.5s =	0	1	0	0	0	0	0	0	0	0	0	145
rank value of 44s =	0	0	0	1	0	0	0	0	0	0	0	146
rank value of 48s =	0	0	0	0	1	0	0	0	0	0	0	147
rank value of 50.3s =	0	0	1	0	0	0	0	0	0	0	0	148
rank value of 55s =	3	0	0	0	0	0	0	0	1	0	0	150.5
rank value of 56s =	0	0	0	0	0	0	0	1	0	0	0	153
rank value of 57s =	1	0	0	0	0	0	0	0	0	0	0	154
rank value of 59.2s =	0	0	1	0	0	0	0	0	0	0	0	155
rank value of 60.7s =	0	0	0	0	0	0	0	0	0	0	1	156
rank value of 63.8s =	0	0	0	0	0	0	0	0	0	0	1	157
rank value of 65s =	1	0	0	0	0	0	0	0	0	0	0	158
rank value of 66s =	0	1	0	0	0	0	0	0	0	0	0	159
rank value of 66.2s =	0	0	1	0	0	0	0	0	0	0	0	160
rank value of 66.5s =	1	0	0	0	0	0	0	0	0	0	0	161
rank value of 68s =	0	0	0	0	0	0	0	0	0	1	0	162
rank value of 70s =	0	0	0	0	0	0	0	0	0	1	0	163
rank value of 71.5s =	0	0	0	0	0	0	0	0	0	0	1	164
rank value of 74s =	1	0	0	0	0	0	0	0	0	0	0	165
rank value of 75s =	0	0	0	0	0	0	0	0	1	0	0	166
rank value of 81s =	0	0	0	0	0	0	0	0	1	0	0	167
rank value of 83s =	1	0	0	0	0	0	0	0	0	0	0	168
rank value of 86s =	2	0	0	0	0	0	0	0	0	0	0	169.5
rank value of 88s =	0	0	1	0	0	0	0	0	0	0	0	171
rank value of 91.1s =	0	0	0	0	0	0	0	0	0	1	0	172
rank value of 92s =	1	0	0	0	0	0	0	0	0	0	0	173
rank value of 99.9s =	0	0	1	0	0	0	0	0	0	0	0	174
rank value of 110s =	0	0	1	0	0	0	0	0	1	0	0	175.5
rank value of 120s =	0	1	0	0	0	0	0	0	1	1	0	178
rank value of 130s =	1	1	0	0	0	0	0	0	0	0	0	180.5
rank value of 138s =	0	0	0	0	0	0	0	0	0	0	1	182
rank value of 140s =	0	0	0	0	0	0	0	0	1	0	0	183
rank value of 150s =	1	0	0	0	0	0	0	0	0	0	0	184
rank value of 160s =	0	0	0	1	0	0	0	0	0	0	0	185
rank value of 170s =	0	0	0	0	0	0	0	0	0	1	0	186
rank value of 190s =	0	0	0	0	0	0	0	0	0	1	0	187
rank value of 200s =	0	0	0	0	0	0	0	0	0	1	2	189
rank value of 220s =	0	0	0	0	0	0	0	0	0	1	0	191
rank value of 230s =	2	0	0	1	0	0	0	0	0	1	0	193.5
rank value of 240s =	0	0	0	0	0	0	0	0	0	1	0	196
rank value of 250s =	0	0	0	0	0	0	0	0	1	0	0	197
rank value of 280s =	0	0	0	0	0	0	0	0	0	1	0	198
rank value of 336s =	0	0	0	0	0	0	0	0	0	0	1	199
rank value of 580s =	0	0	0	1	0	0	0	0	0	0	0	200
rank value of 770s =	0	0	0	0	0	0	0	0	0	0	1	201
rank value of 780s =	0	0	0	1	0	0	0	0	0	0	1	202.5
rank value of 800s =	0	0	0	0	0	0	0	0	0	0	2	204.5
rank value of 830s =	0	0	0	0	0	1	0	0	0	0	0	206
rank value of 1200s =	0	0	0	0	0	0	0	0	0	0	2	207.5
rank value of 1800s =	0	0	0	0	0	0	0	0	0	0	1	209
rank value of 4800s =	0	0	0	0	0	0	0	0	0	0	1	210

0	0	0	0	0	0	0	60	0	0	0
0	0	0	0	0	0	61	0	0	0	0
0	0	0	0	62	0	0	0	0	0	0
0	0	0	0	0	63	0	0	0	0	0
0	0	0	0	0	0	0	0	64	0	0
0	68	68	68	0	0	136	68	0	68	0
0	0	0	72	0	0	0	0	0	0	0
0	0	73	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	74	0	0	0
0	76	0	0	0	76	76	0	0	0	0
0	80	0	80	0	80	80	0	80	0	0
0	83	0	0	0	0	0	0	0	0	0
0	0	84	0	0	0	0	0	0	0	0
0	0	0	86	0	0	0	86	86	0	0
0	0	0	88	0	0	0	0	0	0	0
0	89.5	0	0	89.5	0	0	0	0	0	0
0	0	0	0	0	0	0	91	0	0	0
0	0	0	186	0	0	93	0	0	0	0
0	0	0	0	0	0	0	0	0	95	0
0	0	0	0	0	0	0	0	96	0	0
0	0	0	0	0	97	0	0	0	0	0
0	0	0	0	98	0	0	0	0	0	0
0	0	0	0	0	99	0	0	0	0	0
0	0	0	0	100.5	0	0	100.5	0	0	0
102	0	0	0	0	0	0	0	0	0	0
103	0	0	0	0	0	0	0	0	0	0
0	104	0	0	0	0	0	0	0	0	0
0	0	105.5	0	0	105.5	0	0	0	0	0
0	107	0	0	0	0	0	0	0	0	0
0	109	0	0	109	0	109	0	0	0	0
111	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	112	0	0
113	0	0	0	0	0	0	0	0	0	0
0	0	0	0	114	0	0	0	0	0	0
0	0	0	0	115	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	116
0	0	0	0	0	117	0	0	0	0	0
0	0	0	118	0	0	0	0	0	0	0
0	0	0	0	119.5	0	0	0	0	119.5	0
121	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	122	0	0
123	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	124	0	0	0	0	0
0	0	126.5	126.5	126.5	126.5	0	0	0	0	0
0	0	129	0	0	0	0	0	0	0	0
0	0	0	0	0	0	130	0	0	0	0
0	0	0	0	0	0	131.5	131.5	0	0	0
0	0	0	0	0	133	0	0	0	0	0
0	0	0	134	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	135	0	0
0	0	0	0	0	136	0	0	0	0	0
0	0	0	0	0	137	0	0	0	0	0
138.5	0	0	138.5	0	0	0	0	0	0	0
0	0	0	0	140	0	0	0	0	0	0
0	0	0	0	141	0	0	0	0	0	0
0	0	0	0	0	0	0	142	0	0	0
0	0	0	0	0	0	0	0	0	143	0
0	0	0	0	0	0	0	144	0	0	0
0	145	0	0	0	0	0	0	0	0	0
0	0	0	146	0	0	0	0	0	0	0
0	0	0	0	147	0	0	0	0	0	0
0	0	148	0	0	0	0	0	0	0	0
451.5	0	0	0	0	0	0	0	150.5	0	0
0	0	0	0	0	0	0	153	0	0	0
154	0	0	0	0	0	0	0	0	0	0
0	0	155	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	156
0	0	0	0	0	0	0	0	0	0	157
158	0	0	0	0	0	0	0	0	0	0
0	159	0	0	0	0	0	0	0	0	0
0	0	160	0	0	0	0	0	0	0	0
161	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	162	0
0	0	0	0	0	0	0	0	0	163	0
0	0	0	0	0	0	0	0	0	0	164
165	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	166	0	0
0	0	0	0	0	0	0	0	167	0	0
168	0	0	0	0	0	0	0	0	0	0

0	178	0	0	0	0	0	0	178	178	0
180.5	180.5	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	182
0	0	0	0	0	0	0	0	183	0	0
184	0	0	0	0	0	0	0	0	0	0
0	0	0	185	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	186	0
0	0	0	0	0	0	0	0	0	187	0
0	0	0	0	0	0	0	0	0	189	378
0	0	0	0	0	0	0	0	0	191	0
387	0	0	193.5	0	0	0	0	0	193.5	0
0	0	0	0	0	0	0	0	0	196	0
0	0	0	0	0	0	0	0	197	0	0
0	0	0	0	0	0	0	0	0	198	0
0	0	0	0	0	0	0	0	0	0	199
0	0	0	200	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	201
0	0	0	202.5	0	0	0	0	0	0	202.5
0	0	0	0	0	0	0	0	0	0	409
0	0	0	0	0	206	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	415
0	0	0	0	0	0	0	0	0	0	209
0	0	0	0	0	0	0	0	0	0	210
sum of rank values (R_i)	**3332.5**	**1660.5**	**1681.5**	**2136**	**1586**	**1725.5**	**1068.5**	**1303.5**	**2081.5**	**2581**	**2998.5**

Compute the Kruskal-Wallis statistic:

$$H = \{[12/N(N+1)] * [S^{K}_{i=1} (R_i^2)/N_i]\} -3(N+1)$$

Well =	**Background**	**MW-1A**	**MW-2**	**MW-2D**	**MW-3**	**MW-3D**	**MW-4A**	**MW-8**	**MW-15**
Ri^2/N_i =	755067.0	228125	125770	148868	63427	94395	228034	333078	561938

$N_{i\,bg}$ = 59
N = 210
H = 54.53

Adjust H for ties:

T_i = 167232 sum of T1..T5

$H' = H/(1-(T_i/(N^3-N)))$
H' = 55.53
Chi-square = 15.51

Compare the calculated value H' to the tabulated Chi-square value with K-1 = # groups -1 = 17df at the 5% significance level from Table 1 of the IFG. The value is 15.51 which is less than H' =55.53.
Therefore, there is evidence of significant differences between the well groups.
Post-hoc pairwise comparisons are necessary (see below).

Calculate the critical values to compare each compliance well to the background wells:

Critical Value (C_x) = $P(N(N+1)/12)^{0.5} * (1/N_{i\,bg}+1/N_x)^{0.5}$
P = 2.33 Percentile of Standard Normal Distribution
from Table 4 of IFG
N = total sample size
$N_{i\,bg}$ = total samples (N_i) of background data
N_x = total samples (N_i) of well x

Difference between average ranks (Dx) = Rbar (well x) - avg Rbar (background)

Well =	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	**MW-15**
Rbar (well x) =	106.8	79.3	86.3	59.4	72.4	109.6	129.1	187.4
avg Rbar (background) =	113.1	113.1	113.1	113.1	113.1	113.1	113.1	113.1
Dx =	-6.3	-33.8	-26.9	-53.8	-40.7	-3.6	15.9	74.3
Cx =	36.6	36.6	36.6	38.1	38.1	37.3	36.6	39.9
Statistical Significance ?	No	No	No	No	No	No	No	**Yes**
If SSI, is current event above MCL?	-	-	-	-	-	-	-	No

Compare each difference (Dx) with the corresponding critical value (Cx)

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J10-1957-20

Compound: **Total Zinc**
NC MCL (mg/l): 1050
Method: Shewhart-CUSUM Control Chart

Part 1: Check for Normality

	MW-15	MDL
9/26/2002	**4800**	**10**
4/28/2003	**800**	**10**
10/30/2003	**1800**	**10**
4/20/2004	**770**	**10**
10/21/2004	**1200**	**10**
4/18/2005	**1200**	**10**
10/13/2005	**800**	**10**
4/25/2006	**780**	**50**
10/20/2006	**200**	**10**
4/25/2007	**200**	**10**
10/31/2007	**336**	**10**
4/23/2008	**138**	**10**
10/20/2008	**71.5**	**10**
4/22/2009	NS	**10**
10/26/2009	**63.8**	**10**
4/22/2010	**24.6**	**10**
10/27/2010	**60.7**	**10**

If not detected (ND), use half of the detection limit.

	X_i values =
4800	6.268E+10
800	-21455.98
1800	918932479
770	-192975.3
1200	51567118
1200	51567118
800	-21455.98
780	-109129.7
200	-2.47E+08
200	-2.47E+08
336	-1.19E+08
138	-3.28E+08
71.5	-4.33E+08
63.8	-4.46E+08
24.6	-5.18E+08
60.7	-4.51E+08

X_{bar} = 827.7875
SD = 1180.4801
N = 16
$1/NS_i(X_i-X_{bar})^3$ = 3.807E+09
g_1 = 2.549268

Since the Coefficient of Skewness of 2.55 is greater than 1.0, the real data appear to be significantly skewed.
Do not assume that the data follow a Normal distribution.
Perform the Skewness Test on the natural log of the values.

ln =	X_i values =
8.4763712	17.728315
6.6846117	0.5427984
7.4955419	4.3041774
6.6463905	0.4700187
7.0900768	1.8211876
7.0900768	1.8211876
6.6846117	0.5427984
6.6592939	0.4938103
5.2983174	-0.185744
5.2983174	-0.185744
5.8171112	-0.000139
4.9272537	-0.834908
4.2696974	-4.089742
4.1557532	-5.02771
3.2027464	-18.95164
4.1059437	-5.479128

X_{bar} = 5.8688822
SD = 1.4659836
N = 16
$1/NS_l(X_i-X_{bar})^3$ = -0.439404
g_1 = 0.1536454

Since the Coefficient of Skewness of 0.15 is less than 1.0, the data appear not to be significantly skewed. Proceed with further statistical tests using the log-transformed values shown above.

Part 2: Shewhart-CUSUM Control Chart

Date	MW-15	MDL	Data for Testing
9/26/2002	**4800**	10	8.4763712
4/28/2003	**800**	10	6.6846117
10/30/2003	**1800**	10	7.4955419
4/20/2004	**770**	10	6.6463905
10/21/2004	**1200**	10	7.0900768
4/18/2005	**1200**	10	7.0900768
10/13/2005	**800**	10	6.6846117
4/25/2006	**780**	50	6.6592939
10/20/2006	**200**	10	5.2983174
4/25/2007	**200**	10	5.2983174
10/31/2007	**336**	10	5.8171112
4/23/2008	**138**	10	4.9272537
10/20/2008	**71.5**	10	4.2696974
4/22/2009	NS	10	-
10/26/2009	**63.8**	10	4.1557532
4/22/2010	**24.6**	10	3.2027464
10/27/2010	**60.7**	10	4.1059437

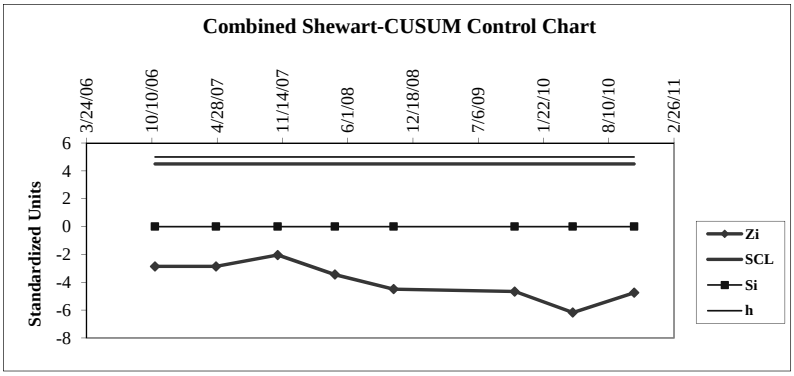
Compute the mean and standard deviation of the historical data:

7.1033718 = x_{mean} (Mean of N1-N8 historical data)
0.6320076 = s (Standard Deviation of N1-N8 historical data)
1 = k (constant, reference value)
5 = h (constant, upper control limit for the CUSUM scheme)
4.5 = SCL (Constant, upper Shewhart Control Limit)

Compute the standardized mean (Z_i) and the cumulative sum (S_i) for each concentration.

Date	x_i	Z_i	S_i	h	SCL
			0		
10/20/2006	5.2983174	-2.8560645	0	5	4.5
4/25/2007	5.2983174	-2.8560645	0	5	4.5
10/31/2007	5.8171112	-2.0351981	0	5	4.5
4/23/2008	4.9272537	-3.4431835	0	5	4.5
10/20/2008	4.2696974	-4.483608	0	5	4.5
10/26/2009	4.1557532	-4.6638974	0	5	4.5
4/22/2010	3.2027464	-6.1718013	0	5	4.5
10/27/2010	4.1059437	-4.7427089	0	5	4.5

Plot Z_i and S_i versus time:



Compare the Z_i and S_i values to their respective control limits of SCL and h.
The limits were not exceeded and do not indicate statistically significant evidence of contamination at the site.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J10-1957-20

Compound: **Acetone**
MCL (mg/l): 700
Method: Poisson Prediction Limits
Background: MW-11S, MW-11D, & MW-14

	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MDL
04/24/00	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NS	**100**
06/26/00	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	**100**
07/26/00	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	**100**
09/18/00	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	**100**
04/09/01	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	**100**
09/18/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**100**
10/29/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**100**
01/30/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**100**
02/28/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**100**
04/15/02	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	**100**
09/26/02	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	**100**
04/28/03	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	**100**
10/30/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10**
04/20/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10**
10/21/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10**
04/18/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**25**
10/13/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**25**
04/25/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**25**
10/20/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**25**
04/25/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**25**
10/31/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**25**
04/23/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**25**
10/20/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**140**	**25**
04/22/09	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	**25**
10/26/09	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	**25**
04/22/10	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	**25**
10/27/10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**25**

1) If not detected (ND), use half of the detection limit.

04/24/00	-	-	-	-	-	-	-	-	-	-	-
06/26/00	-	-	-	-	-	-	-	-	-	-	-
07/26/00	-	-	-	-	-	-	-	-	-	-	-
09/18/00	-	-	-	-	-	-	-	-	-	-	-
04/09/01	-	-	-	-	-	-	-	-	-	-	-
09/18/01	-	-	-	-	-	-	-	-	-	-	-
10/29/01	-	-	-	-	-	-	-	-	-	-	-
01/30/02	-	-	-	-	-	-	-	-	-	-	-
02/28/02	-	-	-	-	-	-	-	-	-	-	-
04/15/02	-	-	-	-	-	-	-	-	-	-	-
09/26/02	-	-	-	-	-	-	-	-	-	-	-
04/28/03	-	-	-	-	-	-	-	-	-	-	-
10/30/03	5	5	5	5	5	5	5	5	5	5	5
04/20/04	5	5	5	5	5	5	5	5	5	5	5
10/21/04	5	5	5	5	5	5	5	5	5	5	5
04/18/05	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5
10/13/05	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5
04/25/06	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5
10/20/06	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5
04/25/07	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5
10/31/07	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5
04/23/08	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5
10/20/08	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	140
04/22/09	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	-
10/26/09	12.5	12.5	12.5	12.5	12.5	12.5	-	-	-	12.5	12.5
04/22/10	12.5	12.5	12.5	12.5	12.5	12.5	-	-	12.5	12.5	12.5
10/27/10				12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5

2) Set the total number of data values for background wells (through the previous sampling event) equal to 'n' = 14.
Use 1/2 of the method detection limit to calculate the Total Poisson Count of the Sum (T_n).

$n = 42$
$T_{n1} = 457.5$

3) Using Gibbons' formula, calculate the upper Poisson Prediction limit T^*_k:

$$T^*_k = cT_{n1} + ct^2/2 + ct[T_{n1}(1+1/c) + t^2/4]^{-0.5}$$

where c = k/n
and where k = the number of future predicted measurements (one per well during the current sampling event)
and where t = the upper 99th percentile of the t-distribution with (n-1) degrees of freedom (Table 6 of the IFG).

$k = 8$
$n = 42$
$T_{n1} = 457.5$
$t[41,.01] = 2.4214$
$c = 0.1905$
$T_{n2} = 100$
$T^*_k = 112.4$

4) Compare the *Poisson Prediction Limit* (T^*_k) to the *Sum of the Concentrations Detected* (T_{n2}) in the wells during the most recent sampling event.
Since the Poisson Prediction Limit was not exceeded, there is no evidence of contamination.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J10-1957-20

Compound: **Carbon Disulfide**
MCL (mg/l): 700
Method: Poisson Prediction Limits
Background: MW-11S, MW-11D, & MW-14

	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MDL
04/24/00	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NS	**100**
06/26/00	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	**100**
07/26/00	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	**100**
09/18/00	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	**100**
04/09/01	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	**100**
09/18/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**100**
10/29/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**100**
01/30/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**100**
02/28/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**100**
04/15/02	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	**100**
09/26/02	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	**100**
04/28/03	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	**100**
10/30/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10**
04/20/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10**
10/21/04	ND	**24**	ND	ND	ND	ND	ND	ND	**15**	ND	ND	**10**
04/18/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10**
10/13/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10**
04/25/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10**
10/20/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10**
04/25/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10**
10/31/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2**
04/23/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2**
10/20/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2**
04/22/09	ND	ND	ND	ND	ND	ND	ND	ND	**4.5**	ND	NS	**2**
10/26/09	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	**2**
04/22/10	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	**2**
10/27/10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2**

1) If not detected (ND), use half of the detection limit.

04/24/00	-	-	-	-	-	-	-	-	-	-	-
06/26/00	-	-	-	-	-	-	-	-	-	-	-
07/26/00	-	-	-	-	-	-	-	-	-	-	-
09/18/00	-	-	-	-	-	-	-	-	-	-	-
04/09/01	-	-	-	-	-	-	-	-	-	-	-
09/18/01	-	-	-	-	-	-	-	-	-	-	-
10/29/01	-	-	-	-	-	-	-	-	-	-	-
01/30/02	-	-	-	-	-	-	-	-	-	-	-
02/28/02	-	-	-	-	-	-	-	-	-	-	-
04/15/02	-	-	-	-	-	-	-	-	-	-	-
09/26/02	-	-	-	-	-	-	-	-	-	-	-
04/28/03	-	-	-	-	-	-	-	-	-	-	-
10/30/03	5	5	5	5	5	5	5	5	5	5	5
04/20/04	5	5	5	5	5	5	5	5	5	5	5
10/21/04	5	24	5	5	5	5	5	5	15	5	5
04/18/05	5	5	5	5	5	5	5	5	5	5	5
10/13/05	5	5	5	5	5	5	5	5	5	5	5
04/25/06	5	5	5	5	5	5	5	5	5	5	5
10/20/06	5	5	5	5	5	5	5	5	5	5	5
04/25/07	5	5	5	5	5	5	5	5	5	5	5
10/31/07	1	1	1	1	1	1	1	1	1	1	1
04/23/08	1	1	1	1	1	1	1	1	1	1	1
10/20/08	1	1	1	1	1	1	1	1	1	1	1
04/22/09	1	1	1	1	1	1	1	1	4.5	1	-
10/26/09	1	1	1	1	1	1	-	-	-	1	1
04/22/10	1	1	1	1	1	1	-	-	1	1	1
10/27/10				1	1	1	1	1	1	1	1

2) Set the total number of data values for background wells (through the previous sampling event) equal to 'n' = 14.
Use 1/2 of the method detection limit to calculate the Total Poisson Count of the Sum (T_n).

$n = 42$
$T_{n1} = 157$

3) Using Gibbons' formula, calculate the upper Poisson Prediction limit T^*_k:

$$T^*_k = cT_{n1} + ct^2/2 + ct[T_{n1}(1+1/c) + t^2/4]^{-0.5}$$

where c = k/n
and where k = the number of future predicted measurements (one per well during the current sampling event)
and where t = the upper 99th percentile of the t-distribution with (n-1) degrees of freedom (Table 6 of the IFG).

$k = 8$
$n = 42$
$T_{n1} = 157$
$t[41,.01] = 2.4214$
$c = 0.1905$
$T_{n2} = 8$
$T^*_k = 44.9$

4) Compare the *Poisson Prediction Limit* (T^*_k) to the *Sum of the Concentrations Detected* (T_{n2}) in the wells during the most recent sampling event.
Since the Poisson Prediction Limit was not exceeded, there is no evidence of contamination.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J10-1957-20

Compound: **2-Butanone**
MCL (mg/l): 4200
Method: Poisson Prediction Limits
Background: MW-11S, MW-11D, & MW-14

	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MDL
04/24/00	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NS	**100**
06/26/00	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	**100**
07/26/00	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	**100**
09/18/00	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	**100**
04/09/01	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	**100**
09/18/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**100**
10/29/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**100**
01/30/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**100**
02/28/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**100**
04/15/02	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	**100**
09/26/02	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	**100**
04/28/03	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	**100**
10/30/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10**
04/20/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10**
10/21/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10**
04/18/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10**
10/13/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10**
04/25/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10**
10/20/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10**
04/25/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10**
10/31/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
04/23/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
10/20/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**54.4**	**5**
04/22/09	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	**5**
10/26/09	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	**5**
04/22/10	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	**5**
10/27/10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**

1) If not detected (ND), use half of the detection limit.

04/24/00	-	-	-	-	-	-	-	-	-	-	-
06/26/00	-	-	-	-	-	-	-	-	-	-	-
07/26/00	-	-	-	-	-	-	-	-	-	-	-
09/18/00	-	-	-	-	-	-	-	-	-	-	-
04/09/01	-	-	-	-	-	-	-	-	-	-	-
09/18/01	-	-	-	-	-	-	-	-	-	-	-
10/29/01	-	-	-	-	-	-	-	-	-	-	-
01/30/02	-	-	-	-	-	-	-	-	-	-	-
02/28/02	-	-	-	-	-	-	-	-	-	-	-
04/15/02	-	-	-	-	-	-	-	-	-	-	-
09/26/02	-	-	-	-	-	-	-	-	-	-	-
04/28/03	-	-	-	-	-	-	-	-	-	-	-
10/30/03	5	5	5	5	5	5	5	5	5	5	5
04/20/04	5	5	5	5	5	5	5	5	5	5	5
10/21/04	5	5	5	5	5	5	5	5	5	5	5
04/18/05	5	5	5	5	5	5	5	5	5	5	5
10/13/05	5	5	5	5	5	5	5	5	5	5	5
04/25/06	5	5	5	5	5	5	5	5	5	5	5
10/20/06	5	5	5	5	5	5	5	5	5	5	5
04/25/07	5	5	5	5	5	5	5	5	5	5	5
10/31/07	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
04/23/08	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
10/20/08	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	54.4
04/22/09	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	-
10/26/09	2.5	2.5	2.5	2.5	2.5	2.5	-	-	-	2.5	2.5
04/22/10	2.5	2.5	2.5	2.5	2.5	2.5	-	-	2.5	2.5	2.5
10/27/10				2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5

2) Set the total number of data values for background wells (through the previous sampling event) equal to 'n' = 14.
Use 1/2 of the method detection limit to calculate the Total Poisson Count of the Sum (T_n).

$n = 42$
$T_{n1} = 165$

3) Using Gibbons' formula, calculate the upper Poisson Prediction limit T^*_k:

$$T^*_k = cT_{n1} + ct^2/2 + ct[T_{n1}(1+1/c) + t^2/4]^{-0.5}$$

where c = k/n
and where k = the number of future predicted measurements (one per well during the current sampling event)
and where t = the upper 99th percentile of the t-distribution with (n-1) degrees of freedom (Table 6 of the IFG).

$k = 8$
$n = 42$
$T_{n1} = 165$
$t[41,.01] = 2.4214$
$c = 0.1905$
$T_{n2} = 20$
$T^*_k = 46.8$

4) Compare the *Poisson Prediction Limit* (T^*_k) to the *Sum of the Concentrations Detected* (T_{n2}) in the wells during the most recent sampling event.
Since the Poisson Prediction Limit was not exceeded, there is no evidence of contamination.